Vol. I

TRANSCRIPT OF RECORD

Supreme Court of the United States

OCTOBER TERM, 1926

No. 357

ALBERT OTTINGER, AS ATTORNEY GENERAL OF THE STATE OF NEW YORK, APPELLANT,

vs.

CONSOLIDATED GAS COMPANY OF NEW YORK

APPEAL FROM THE DISTRICT COURT OF THE UNITED STATES FOR THE SOUTHERN DISTRICT OF NEW YORK

FILED APRIL 29, 1926

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[fols. a & 1]

IN UNITED STATES DISTRICT COURT, SOUTHERN DISTRICT OF NEW YORK

CONSOLIDATED GAS COMPANY OF NEW YORK, Plaintiff,

against

WILLIAM A. PRENDERGAST, WILLIAM R. POOLEY, CHARLES Van Voorhis, Oliver C. Semple, and James A. Parsons, Constituting the Public Service Commission of the State of New York, and Carl Sherman, as Attorney-General of the State of New York, Defendants.

BILL OF COMPLAINT

The plaintiff complains and alleges, upon information and belief:

I. The plaintiff was organized in the year 1884, under and in pursuance of the provisions of Chapter 367 of the Laws of 1884, entitled "An act to authorize the consolidation of manufacturing corporations." The organization took place by the consolidation of six then existing gas companies, as follows:

New York Gas Light Co.,	incorporated	in 1823.
Manhattan Gas Light Co.,	"	" 1830.
Metropolitan Gas Light Co.,	"	" 1855.
Harlem Gas Light Co.,	"	" 1855.
Municipal Gas Light Co.	"	" 1874.
Knickerbocker Gas Light Co.,	"	" 1876.

[fol. 2] At the time of consolidation, the six companies above described owned and used certain lands, buildings and other property, real and personal, for, and were actually engaged in, the manufacture, sale and distribution of gas in what was then the City of New York, now the Borough of Manhattan, City of New York. In addition to the property above described, the six constituent companies were possessed of, owned and were in the actual enjoyment of, perpetual franchises and rights to use the streets, alleys and public places to the City of New York, for the purpose

of laying street mains therein and supplying gas through said mains to the inhabitants of the city.

II. By virtue of the consolidation and of the law authorizing it, the plaintiff company became possessed of and became the owner in fee simple of all of the real property owned by the six constituent companies and the owner of the franchises and rights then owned, possessed or enjoyed by the constituent companies and of the personal property owned by the said companies.

III. The plaintiff company has, ever since the date of consolidation (November 10, 1884), owned, possessed, used and enjoyed all of the said franchises and rights of the said constituent companies, and still does own, possess, use and enjoy the said franchises and each of them, together with additional rights and franchises from time to time acquired by it; and the plaintiff company, by virtue of the said franchises and rights, has ever since said date maintained and still does maintain its mains and services in the streets, alleys and public places of the City of New [fol. 3] York, and has supplied and still does supply gas through said mains and services to the inhabitants of the City of New York.

IV. The plaintiff is required by law, under penalty, to supply gas, upon application of the owner or occupant, to all buildings and premises within one hundred feet of any mains laid by it, and to furnish gas-meters to its consumers without rent or charge.

V. The defendants William A. Prendergast, William R. Pooley, Charles Van Voorhis, Oliver C. Semple and James A. Parsons constitute the Public Service Commission of the State of New York, and are now acting as such Commission, having been duly appointed under and by virtue of the provisions of Chapter 480 of the Laws of 1910 of the State of New York, known as Chapter 48 of the Consolidated Laws of the State of New York, as amended and supplemented by several acts, including Chapter 134 of the Laws of 1921, prescribing their powers and providing for the regulation of certain public service corporations, including the plaintiff. The defendants are citizens of, and reside in, the State of New York, and at least one of the

defendants resides in the Borough of Manhattan, City of New York, in the Southern District of New York. The defendants have and maintain an office, as such Public Service Commission, in the Borough of Manhattan, City of New York, within the Southern District of New York.

VI. The defendant Carl Sherman is the Attorney-General of the State of New York, is a citizen of the State of [fol. 4] New York, and resides in the City of Buffalo, in the State of New York. The defendant has and maintains an office, as such Attorney-General, in the Borough of Manhattan, City of New York, within the Southern District of New York.

VII. By Subdivision 5 of Section 66 of Chapter 480 of the Laws of 1910, as supplemented and amended by several acts, including Chapter 134 of the Laws of 1921, known as the "Public Service Commission Law," it is provided that, whenever the said Commission shall be of opinion, after a hearing had upon its own motion or upon complaint, that the rates, charges or classifications or the acts or regulations of any gas corporation, the definition of which includes the plaintiff, are unjust, unreasonable, unjustly discriminatory or unduly preferential or in anywise in violation of any provision of law, the said Commission shall determine and prescribe, in the manner provided by and subject to the provisions of Section 72 of the said chapter, the just and reasonable rates, charges and classifications thereafter to be in force for the service to be furnished, notwithstanding that a higher or lower rate or charge has theretofore been prescribed by general or special statute, contract, grant, franchise condition, consent or other agreement, and the just and reasonable acts and regulations to be done and observed.

VIII. By Subdivision 3 of Section 66 of the said chapter, as so supplemented and amended, it is provided that the said Commission shall have power by order to fix and change, from time to time, standards of the purity, illumi- [fol. 5] nating power and heating power, and standards for the measurement thereof, of gas to be manufactured, distributed or sold by persons, corporations or municipalities for lighting, heating or power purposes, notwithstanding that other standards of the purity, illuminating power and

heating power of gas and standards for the measurement thereof, may have been fixed by general or special statute, and by order to require the gas so manufactured, distributed or sold to equal the standards so fixed by it, and to prescribe, from time to time, the reasonable minimum and maximum pressure at which gas shall be delivered by such persons, corporations or municipalities.

IX. By Section 72 of the said chapter, as so supplemented and amended, relating to complaints as to the quality and price of gas, it is provided that, after a hearing and after such an investigation as shall have been made by the said Commission or its officers, agents, examiners or inspectors, the said Commission may, by order, fix just and reasonable prices, rates and charges for gas to be charged by a gas corporation, for the service to be furnished, notwithstanding that a higher or lower price has been theretofore prescribed by general or special statute, contract, grant, franchise condition, consent or other agreement, and may order such improvement in the manufacture, distribution or supply of gas, or in the methods employed by a gas corporation, as will in its judgment be adequate, just and reasonable, and that any such change in price shall be upon such terms, conditions or safeguards as the said Commission may prescribe. By Section 72 of [fol. 6] the said chapter, it is further provided that the price fixed by the said Commission under the said Section 72 or under the said Subdivision 5 of Section 66, shall be the maximum price to be charged by such gas corporation for gas for the service to be furnished within the territory and for a period to be fixed by the said Commission in the order, not exceeding three years, except in the case of a sliding scale, and thereafter until the Commission shall, upon its own motion or upon complaint of any corporation, person or municipality interested, fix a higher or lower maximum price of gas to be thereafter charged.

X. By Subdivision 1 of Section 23 of the said chapter, as so supplemented and amended, it is provided that, within a time specified in the order of the Commission, every person and corporation upon whom it is served must, if so required in the order, notify the Commission whether the terms of the order are accepted and will be obeyed, and

that every order of a Commission shall take effect at a time therein specified and shall continue in force either for a period which may be designated therein or until changed or abrogated by the Commission, unless such order be unauthorized by the said chapter or any other act or be in violation of a provision of the Constitution of the State or of the United States.

XI. Prior to the amendment of said Chapter 480 of the Laws of 1910 by Chapter 134 of the Laws of 1921, the plaintiff was advised by counsel and believed that, under the construction placed by the Courts of the State of New York upon the said Chapter 480 of the Laws of 1910, before it [fol. 7] was so amended, the Public Service Commission of the State of New York for the First District, as then constituted, had no power to permit the plaintiff to increase the rate which it might charge for gas supplied, in excess of the maximum rate of eighty cents per thousand cubic feet prescribed by Chapter 125 of the Laws of 1906 of the State of New York.

XII. On or about the 16th day of January, 1919, the plaintiff exhibited in the District Court of the United States for the Southern District of New York, its complaint against Charles D. Newton, as Attorney-General of the State of New York, Edward Swann as District Attorney of the County of New York, State of New York, and Travis H. Whitney, Charles S. Hervey, and Frederick J. Kracke, constituting the Public Service Commission of the State of New York for the First District, whereby the plaintiff sought to have Chapter 125 of the Laws of 1906 of the State of New York, in so far as it prohibited the plaintiff from charging or receiving for gas manufactured or sold in the Borough of Manhattan a sum per one thousand cubic feet in excess of a rate of eighty cents per one thousand cubic feet, declared illegal and void, because in contravention of Section 10 of Article 1 and of the Fourteenth Amendment of the Constitution of the United States; and the plaintiff further prayed that writs of injunction issue out of the said Court, restraining each of the defendants from enforcing or attempting to enforce the provisions of said Act of 1906 against the plaintiff, and for other and further relief, as in the said complaint was more fully set forth.

[fol. 8] XIII. The defendants named in the said complaint described in the last preceding paragraph were duly served with process and duly appeared and respectively filed answers in the said cause. Thereafter, the said cause was duly referred to the Honorable Abraham S. Gilbert as Special Master to take all the testimony and evidence with respect to the issues therein, make all needed computations and fully find the facts, and report to the Court all the testimony and evidence received by him, together with his findings of fact and his recommendations as to the facts and the law; and thereafter such proceedings were had in the said cause that the said Special Master duly made his report, dated May 5, 1920, wherein and whereby he found, among other things, that the total reasonable cost of gas delivered to its consumers by the plaintiff in cents per thousand cubic feet of gas sold was, aside from any return upon the property owned by the plaintiff and used by it in the service of its consumers or the property of other companies devoted to the use of the plaintiff's consumers, $.7518 as of the year 1919, but after excluding from the operating expenses of the plaintiff in its gas business certain items set forth in the said report which the said Special Master found and reported should nevertheless be included in operating expenses in determining a fair rate for gas to be charged by the plaintiff; and wherein and whereby the said Special Master further found and reported that the amount invested in the plant and property of the plaintiff, used and useful in its gas business as of January 1, 1919, as shown by the plaintiff's books of account, and in certain property of other companies devoted to the use of the plaintiff, including the plant of the Astoria Light, Heat and Power Com-[fol. 9] pany, was at least the sum of $71,054,351.14, and that as of January 1, 1919, the plaintiff also had working capital, devoted to its gas business, in the sum of at least $3,800,000; and further that the plant, machinery and equipment used in the gas business of the plaintiff had been and then were maintained in excellent operating condition; that proper repairs, renewals and replacements had been made as and when needed, and that the same were then in as high a state of efficiency as if new; and further that the reasonable and proper rate of return upon the capital invested in the plant, distributing system and other proper-

ties owned by the plaintiff and used and useful in its gas business was not less than eight per cent per annum; and wherein and whereby the said Special Master recommended that it be adjudged and decreed that Chapter 125 of the Laws of 1906, in so far as it provided that the plaintiff should not charge or receive for gas manufactured, furnished or sold by it a sum per thousand cubic feet in excess of a rate of eighty cents, during the years 1918, 1919, and thereafter, was illegal and void, because in contravention of Section 10 of Article 1 of the Constitution of the United States and of the Fourteenth Amendment of said Constitution, and that the plaintiff should have the other and further relief against the defendants in that suit which was asked for in the complaint therein.

XIV. Thereafter, the said cause was duly heard in this Court; and on the 11th day of August, 1920, there was rendered and filed in the said Court a final decree, which passed upon the various exceptions of the parties to the said cause and confirmed the said report and findings of the [fol. 10] said Special Master in all other respects, including those hereinbefore mentioned, and which adjudged that Chapter 125 of the Laws of 1906 of the State of New York, in so far as it prohibited the plaintiff from charging and receiving more than at the rate of eighty cents per thousand cubic feet for the sale of gas in the Borough of Manhattan had been, since at least January, 1918, and then was, confiscatory and deprived the plaintiff of its property without due process of law, contrary to the Fourteenth Amendment of the Constitution of the United States; and that said statute had been since at least January 1, 1918, and then was, invalid as violative of the said provisions of the Constitution of the United States, and adjudged and decreed that the plaintiff was entitled to the relief prayed for, and granted the permanent injunction prayed for in the said complaint.

XV. Thereafter, an appeal from the said final decree was duly taken by the defendants to the Supreme Court of the United States; and the said decree was by that Court duly affirmed on or about March 6, 1922; and a mandate was duly issued by that Court accordingly, and was duly filed in this Court, and by an order duly made and entered in the said

cause, the judgment of the Supreme Court was made in all respects the judgment of this Court.

XVI. On or about the 20th day of May, 1921, the said Commission, upon its own motion, duly instituted a proceeding before it for the purpose of investigating the rates charged by the various gas corporations in the City of New York, including the plaintiff, and their operating expenses, [fol. 11] revenues, service, properties and investment, and made an order for a hearing to be held before it in its Case No. 79 for that purpose; and thereafter, such proceedings were had that on or about the 30th day of August, 1922, the said Commission rendered and filed an opinion, setting forth its findings and conclusions and the reasons for the making and entry of orders, prescribing a calorific standard for gas to be furnished and the rates for such gas to be charged by certain gas corporations, including the plaintiff, a copy of which opinion is hereto annexed and made a part hereof and marked Exhibit "A"; and thereupon, and contemporaneously with the making and entry of an order prescribing a calorific standard for gas as hereinafter more fully described, the said Commission made and entered an order, a copy of which order is hereto annexed and made a part hereof and marked Exhibit "B," wherein and whereby the said Commission found that, as of June 30, 1922, the investment in the property owned by the plaintiff and used in its gas business amounted to $56,597,757.62 (which sum does not include the property of other companies used by the plaintiff in the service of its consumers), and that as of such date the value of such property, upon the basis of the reproduction cost thereof, was much greater, and wherein and whereby the Commission further found that the plaintiff had been and was entitled to earn a fair return on at least the said sum, and wherein and whereby the said Commission ordered that on and after the 1st day of October, 1922, and until the 30th day of September, 1923, and thereafter until the said Commission should otherwise order, the just and reasonable rates to be charged [fol. 12] by the plaintiff to all of its consumers in the City of New York, other than The City of New York, and the classifications of the service furnished to such consumers, should be as follows:

First 100,000 cubic feet of gas per meter per month, $1.15 per thousand cubic feet.

Next 200,000 cubic feet of gas per meter per month, $1.10 per thousand cubic feet.

Next 300,000 cubic feet of gas per meter per month, $1.05 per thousand cubic feet.

Next 400,000 cubic feet of gas per meter per month, $1.00 per thousand cubic feet.

All over 1,000,000 cubic feet of gas per meter per month, $.95 per thousand cubic feet.

XVII. In the said opinion rendered and filed by the Commission contemporaneously with the making and entry of the said order, it was unanimously stated and determined by the Commission that, if the rates so fixed should be accepted and put in force by the plaintiff, "the rates to be established are to be effective for a year." In view of the fact that a large part of the gas sold by the plaintiff was, and is, furnished to consumers using less than 100,000 cubic feet of gas per meter per month, such graduated scale or rates was adjusted by the said Commission, in prescribing the said rates, so as to yield to the plaintiff a revenue approximating $1.145 per thousand cubic feet of gas sold, and such graduated scale of rates has in fact yielded to the plaintiff a revenue approximating that amount, as hereinafter more fully appears.

XVIII. The said Commission in its said opinion further stated and found:

"Although the facts known to the Commission and con- [fol. 13] firmed by the analysis of exhibits in the conferences indicate that the rates now fixed by the Commission could hardly be deemed adequate if based only upon present conditions and present costs of manufacture, distribution, taxes, maintenance of property, and return upon investment, the Commission feels confident that upon the greater stabilization of prices and the realization of certain prospective reductions in expense, the rates hereby put in force will approach the requirements of adequacy."

XIX. In and by the said order of August 30, 1922, it was further ordered by the said Commission that the said order should take effect October 1, 1922, and should continue in

force until September 30, 1923, and thereafter until the Commission should otherwise order, and that, within ten days from the date of the service of a copy thereof, the plaintiff should notify the said Commission in writing whether the terms and conditions of the said order were accepted and would be obeyed.

XX. Thereafter, the said Commission, pursuant to the provisions of the said order and the authority vested in the Commission by Sub-division 1 of Section 23 of the Public Service Commission Law as amended, caused a certified copy of the said order of August 30, 1922, to be duly served upon the plaintiff; and on or about the 13th day of September, 1922, the plaintiff duly notified the said Commission in writing that the terms and conditions of the said order were accepted by the plaintiff and would be obeyed. The notification of acceptance, sent by the plaintiff to the said Commission as above stated, read and provided as follows:

[fol. 14] "The Consolidated Gas Company of New York hereby acknowledges receipt of a copy of an Order certified by the Secretary of the Commission to have been adopted by the Commission on August 30, 1922, in the above-entitled proceeding, prescribing the rates to be charged for gas by the said company to all of its consumers other than the municipality of the City of New York, and the classifications of the gas service furnished to such consumers.

"The Consolidated Gas Company of New York hereby notifies the Commission that the said Order of August 30, 1922, and the terms and conditions thereof, are accepted by the Company and will be obeyed.

"In accepting, and agreeing to obey, the said Order of August 30, 1922, conditioned for the period therein prescribed, the Consolidated Gas Company of New York does not waive its right, upon any hearings or proceedings hereafter had, to a return upon the full value of its property at such time, nor its right to reimbursement for losses sustained by it since January 1, 1917, by reason of inadequate rates; nor does the Company admit that the rates prescribed by the said Order are adequate or that they are such as to afford to this Company just compensation for the gas service furnished by it, or a fair return upon its investment in its gas property as found by the Commission, much less upon the present value thereof. Increases in

the costs of operations, particularly those due to the high prices necessarily paid for coal or coke, have aggravated the inadequacy of the rates now in force and leave the rates fixed by the said Order substantially less than adequate under present conditions. In deference, however, [fol. 15] to the views of the Commission, reached after extended investigation, and in an expectation or hope that, as intimated by the Commission in its Opinion, some reductions in operating expenses during the period stipulated by the Commission for the continuance of the rates now prescribed, may render such rates more nearly adequate, the Consolidated Gas Company of New York has determined to, and does hereby accept, the said Order of August 30, 1922, upon the terms and conditions therein set forth."

XXI. On or about the 20th day of May, 1921 contemporaneously and in conjunction with its said proceedings as to rates in Case No. 79, the said Commission duly instituted a proceeding before it, upon its own motion, in its Case No. 108, relative to the standards of purity, lighting power and heating power of gas and the standards of measurement thereof, in the City of New York and suburban territory; and such proceedings were had in the said last-mentioned proceeding that on or about the 30th day of August, 1922, contemporaneously with its said rate order in Case No. 79, the said Commission made and entered an order in its Case No. 108, identified by reference with and correlated to its contemporaneous order in Case No. 79, a copy of which order in Case No. 108 is hereto annexed and made a part hereof and marked Exhibit "C," wherein and whereby it found that the standard of 22 candle power theretofore prescribed by statute was unreasonable, uneconomical and improper, that the continuance of such standard would not be in the public interest, and that a standard of quality and measurement based upon the heat-[fol. 16] ing power of gas, as thereinafter more particularly specified, should be fixed by the Commission, and wherein and whereby the said Commission directed that on and after October 1, 1922, each gas corporation supplying manufactured gas in the Boroughs of Manhattan, Brooklyn, The Bronx, Queens and Richmond, comprising the City of New York, and in the franchise territory of the Queens Borough Gas and Electric Company in the County of Nas-

sau, should, in lieu of the existing standard or standards, furnish to its consumers a quality of gas which should comply with certain requirements therein prescribed, including a requirement that, under specified conditions, the gas furnished should have a total heating value on a monthly average of not less than 537 British thermal units per cubic foot, and a daily average of not less than 525 British thermal units per cubic foot on any three consecutive calendar days in any month, all as more fully set forth in the said order; and wherein and whereby it was further directed that the said order should take effect on the date specified therein, and should continue in effect until changed, modified or abrogated by the said Commission, and that, within ten days of the service of a copy thereof, each gas corporation therein described, including the plaintiff, should notify the said Commission whether the said order was accepted and would be obeyed.

XXII. Thereafter, the said Commission caused a certified copy of the said order in its Case No. 108, of August 30, 1922, to be duly served upon the plaintiff; and on or about the 12th day of September, 1922, the plaintiff duly notified the said Commission in writing that the terms and [fol. 17] conditions of the said order in Case No. 108 were accepted and would be obeyed by the plaintiff. The plaintiff's acceptance of the said order of the Commission in Case No. 79 was based and conditioned on the contemporaneous entry of the order in Case No. 108 and the continuance of the calorific standard thereby fixed.

XXIII. Thereafter, and in pursuance of the said orders of the Commission in Cases No. 79 and 108, the plaintiff duly filed with the said Commission, and duly posted and published as required by law and order of the said Commission, its tariff schedules, setting forth the rates, charges and classifications to be in force for the service to be furnished by the plaintiff, in accordance with the said orders of the said Commission in its Case No. 79 and Case No. 108, of August 30, 1922, and the plaintiff's filed acceptance of such orders; and the plaintiff has complied in all respects with the terms, provisions and conditions of the said order in Case No. 79 and of the said Order in Case No. 108.

XXIV. By Chapter 899 of the Laws of 1923 of the State of New York, entitled, 'An Act to amend the public service commission law, in relation to the charge for illuminating gas in cities containing a population of one million or over," the said Chapter 480 of the Laws of 1910 was amended, by inserting therein a new section to follow Section sixty-seven, to be Section sixty-seven-a, to read as follows:

"§67-a. Charge for gas in cities of one million or more. A gas corporation engaged in the business of manufacturing, furnishing or selling illuminating gas in a city con-[fol. 18] taining a population of one million or over shall not charge or receive for gas furnished or sold in such city a sum per one thousand cubic feet in excess of one dollar, nor furnish in such city gas of a standard less than six hundred and fifty British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure. The public service commission, notwithstanding any other provision of this chapter, shall not allow a rate or charge in the case of such cities in excess of such sum."

XXV. By said Chapter 899 of the Laws of 1923, it is provided that the said Act shall take effect immediately; and the said Act took effect, by the signing thereof by the Governor of the State of New York, on June 2, 1923.

XXVI. The City of New York, in which the plaintiff is engaged in the business of manufacturing, furnishing and selling illuminating gas, is a city containing a population of one million or over, and is the only city of such size and population within the State of New York. The Constitution of the State of New York, in its classification of the cities of the State, does not state or recognize a classification of cities under which one class is made up of cities containing a population of one million or over.

XXVII. The plaintiff has a paid-up capital of nearly $165,000,000, and debts outstanding, as of April 30, 1923, of approximately $10,000,000, and substantial other invested resources including capital stock premiums. More than $68,000,000 of its resources are invested in property used in its gas business.

[fol. 19] XXVIII. The investment in the plaintiff's property devoted to its gas business, as found by the said Special Master as of January 1, 1919, and as found by the said Commission as of June 30, 1922, plus net additions thereto, to December 31, 1922, is at least the sum of $67,997,206.38, which is the minimum value of such property. The present value of the plaintiff's property devoted to its gas business as of December 31, 1922, based upon current prices of materials and labor entering therein, is at least the sum of $143,608,155, exclusive of any allowance for going value.

XXIX. In addition thereto, the plaintiff is possessed of going value and other intangible assets of great value; and there now exists an aggregate deficiency in the plaintiff's earnings below eight per cent (8%) upon the said minimum value of the said property devoted to its gas business, under the rates charged by the plaintiff during the period when the plaintiff was prevented by the acts of public authorities from establishing just and reasonable rates; that is, from at least January 1, 1917, to December 31, 1921, in the sum of at least $31,876,716.59, which aggregate deficiency should be added to the above-stated value of the plaintiff's property upon which the plaintiff is entitled to a return.

XXX. A return of eight per cent per annum upon the present value of the property devoted to the gas business of the plaintiff is a reasonable return, and is the rate expected and usually realized in the locality where such property is located, upon the present value of investments of a similar nature, with due regard to the risk attending them.

[fol. 20] XXXI. The gas sales of the plaintiff during the year ended December 31, 1922, amounted to 20,580,285,600 cubic feet. The rates charged by the plaintiff during the year ended December 31, 1922, were, from January 1, 1922, to September 30, 1922, $1.25 per thousand cubic feet of gas, and from October 1, 1922, to December 31, 1922, the rates prescribed by said order of the Commission of August 30, 1922, and the average rate per thousand cubic feet of gas sold to the consumers of the plaintiff charged during the year ended December 31, 1922, was $1.2230. The average rate per thousand cubic feet of gas sold to the consumers

of the plaintiff under the rates prescribed by the said Commission from October 1, 1922, amounts to $1.1435 per thousand cubic feet sold.

XXXII. The actual gross operating revenues from the plaintiff's gas business, and the cost of manufacture and distribution of the gas sold by the plaintiff to its consumers, together with taxes and other operating expenses, including therein interest at eight per cent. (8%) actually paid by the plaintiff upon the investment of other companies in property devoted to the use of the plaintiff for its consumers, and the net income, for the year ended December 31, 1922, were as follows:

	Amount	Per M cu. ft. of gas sold
Gross Operating Revenue	$25,168,708.89	$1.2230
Operating Expenses, after giving effect to Miscellaneous Operating Revenue	21,220,469.89	1.0311
Net Income	$3,948,239.00	$ .1919

[fol. 21] Such net income yielded a return upon the property of the plaintiff used in its gas business, as follows:

Upon the minimum value	6.30%
Upon the minimum value inclusive of the deficiency in earnings below an 8% return during the period from January 1, 1917 to December 31, 1921	4.29%
Upon the present value	2.98%
Upon the present value inclusive of the deficiency in earnings as stated above	2.44%

XXXIII. The effect of an enforcement of a rate of $1.00 per thousand cubic feet, as prescribed by Chapter 899 of the Laws of 1923, if applied to the actual operations of the year ended December 31, 1922, would have been as follows:

Gross operating revenues:			Amount	Per M cu. ft. of gas sold
Commercial sales	20,462,683,900 c. f.	@ $1.00	$20,462,683.90	$1.00
Municipal sales	117,601,700 c. f.	@ .75	88,201.28	.75
Total	20,580,285,600 c. f.		20,550,885.18	.9986
Operating expenses			21,220,469.89	1.0311
Operating Loss at the $1.00 rate			$669,584.71	$.0325

The rate of $1.00 per thousand cubic feet as prescribed by Chapter 899 of the Laws of 1923, if applied to the actual operations of the plaintiff during the year ended December 31, 1922, would thus have deprived the plaintiff of any return upon its investment in its gas business, thus effecting the confiscation of all of its gas property, and would have imposed upon the plaintiff a direct operating loss of more than $650,000.

Had the rates prescribed by the said order of the said Commission, dated August 30, 1922, been in effect for the full year ended December 31, 1922, the result of operations [fol. 22] in the plaintiff's gas business for the year ended December 31, 1922, would have been as follows:

	Amount	Per M cu. ft. of gas sold
Gross operating revenues	$23,533,556 58	$1 1435
Operating expenses, as above	21,220,469 89	1 0311
Net income	$2,313,086 69	$ 1124

Such net income at the rates prescribed by the said Commission, if applied to the full year 1922, would have yielded a return upon the property of the plaintiff, used in its gas business, as follows:

Upon the minimum value	3 73%
Upon the minimum value, inclusive of the deficiency in earnings, as stated above	2 54%
Upon the present value	1 77%
Upon the present value, inclusive of the deficiency in earnings, as stated above	1 44%

XXXIV. The investment of other companies in property devoted to the use of the plaintiff in its gas business, upon which the plaintiff paid interest at the rate of eight per cent (8%), during the year ended December 31, 1922, as found by the Special Master, and as found by the said Commission, as of June 30, 1922, plus net additions thereto and including December 31, 1922, is at least the sum of $29,105,349.60, which is the minimum value of such property. The present value of such property used in the service of plaintiff's customers in at least the sum of $42,862,866.75.

XXXV. The actual gross operating revenues from the plaintiff's gas business, and the operating expenses, after eliminating therefrom all interest upon investment in the property of other companies devoted to the plaintiff's use, and the net income, for the year ended December 31, 1922, were as follows:

	Amount	Per M cu. ft. of gas sold
[fol. 23] Gross Operating Revenues	$25,168,708 89	$1 2230
Operating Expenses, exclusive of interest charges upon property of other companies used by plaintiff, and after giving effect to Miscelleaneous Operating Revenue	18,825,036 50	9147
Net Income	$6,343,672 39	$ 3083

Such net income yielded a return upon the total property employed for the plaintiff's consumers, including both the property of the plaintiff and the property owned by other companies and used by the plaintiff, as follows:

Upon minimum value	6 97%
Upon minimum value inclusive of deficiency in earnings below an 8% return during the period from January 1, 1917, to December 31, 1922	5 25%
Upon present value	3 63%
Upon present value inclusive of the deficiency as stated above	3 10%

The effect of the enforcement of a rate of $1.00 per thousand cubic feet, as prescribed by Chapter 899 of the Laws of 1923, if applied to the actual operations of the year ended December 31, 1922, after excluding therefrom interest charges upon property of other companies used by the plaintiff and including such property of other companies with the investment of the plaintiff, would have been as follows:

	Amount	Per M cu. ft. of gas sold
[fol. 24] Gross Operating Revenue, as stated above	$20,550,885 18	$ 9986
Operating Expenses, exclusive of interest charges on property of other companies used by the plaintiff, and after giving effect to Miscellaneous Operating Revenues	18,825,036 50	0147
Net Income	$1,725,848 68	$ 0839

Such net income would have yielded a return on the total property used in the plaintiff's gas business, as follows:

Upon the minimum value	1 90%
Upon the minimum value inclusive of deficiency in earnings as stated above	1 43%
Upon the present value	0 98%
Upon the present value inclusive of deficiency in earnings as stated above	0 84%

Had the rates prescribed by the said order of the said Commission, dated August 30, 1922, been in effect during the full year ended December 31, 1922, the result of operations in the plaintiff's gas business for the year ended December 31, 1922, with interest on property of other companies excluded from operating expenses, would have been as follows:

	Amount	Per M cu. ft. of gas sold
Gross Operating Revenues	$23,533,556 58	$1 1435
Operating Expenses, as above	18,825,036 50	9147
Net Income	$4,708,520 08	$ 2288

Such net income at the rates prescribed by the said Commission if applied to the full year 1922, would have yielded a return upon the total property used in plaintiff's gas business, as follows:

[fol. 25] Upon the minimum value	5 18%
Upon the minimum value, inclusive of deficiency in earnings, as stated above	3 90%
Upon present value	2 69%
Upon the present value, inclusive of deficiency in earnings, as stated above	2 30%

XXXVI. The rate required, per thousand cubic feet of gas sold, to pay operating expenses and provide a return at eight per cent. (8%) and seven per cent. (7%), respectively, upon the value of the property employed in plaintiff's gas business, and provide for the Federal income tax upon such return, as set forth more fully in the statement hereto annexed and made a part hereof and marked Exhibit "D," is as follows:

	For 8% return	For 7% return
Upon the minimum value	$1 2878	$1 2392
Upon the minimum value inclusive of deficiency in earnings below 8% during period from January 1, 1917, to December 31, 1921	1 4205	1 3553
Upon the present value	1 6527	1 5584
Upon the present value inclusive of deficiency as stated above	1 7854	1 6746

XXXII. The effect upon the cost of gas for the year 1922, of a change in the gas standard from that actually in effect since October 1, 1922 (about 600 British thermal units per cubic foot) to 537 British thermal units, would not exceed three cents per thousand cubic feet. The cost to the plaintiff of manufacturing gas having a minimum heating value of 650 British thermal units per cubic foot, would be at least as much as the average cost for the year ended December 31, 1922, notwithstanding there has been some saving in the cost of certain materials. The increased cost of other materials has more than offset these reductions. The present price of gas oil is the same as that at which [fol. 26] it was contracted for during the nine months of

1922, subsequent to April 1st, which is about ten per cent. (10%) less than the price paid during the first three months of 1922. Had the lower price of oil been in effect during the entire year 1922, instead of only nine months, the cost of gas per thousand cubic feet, heretofore shown, would have been reduced by less than one cent. While the present price of gas oil is therefore slightly less than the average of the year 1922, the increased quantity of oil which would be necessary per thousand cubic feet of gas made, to meet the requirements of Chapter 899 of the Laws of 1923, would result, as hereinafter shown, in an increased cost of the quantity of gas oil necessarily used by the plaintiff per thousand cubic feet of gas made. Iron products, firebrick, and other materials necessarily used extensively in the repair and maintenance of plaintiff's plant and distributing system are substantially higher than the average prices of the year 1922.

XXXVIII. The plaintiff is advised, and believes, that there is no likelihood of any substantial decrease in the unit costs of materials and labor entering into the manufacture and distribution of gas by the plaintiff, during the year 1923, or at any time for which factors now known can be taken into account.

XXXIX. The said rate of $1.00 per thousand cubic feet of gas, ever since it became effective, deprived the plaintiff and does now, and will continue to, deprive the plaintiff of a reasonable return upon the fair value of its property devoted to the manufacture and distribution of gas as [fol. 27] aforesaid; and it has not permitted, does not now permit, and will not hereafter permit the plaintiff to earn a reasonable return thereon; and the said Act is in violation of Section 10 of Article 1 of the Constitution of the United States, in that it impairs the obligation of the plaintiff's contract with the State of New York; and it is also in violation of the Fourteenth Amendment to the Constitution of the United States, in that it deprives the plaintiff of its property without due process of law and denies to it the equal protection of the laws.

XL. The said provision of said Chapter 899 of the Laws of 1923, prohibiting the plaintiff from furnishing in the City of New York gas of a standard less than 650 British

thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, is in violation of the Fourteenth Amendment of the Constitution of the United States, in that it deprives the plaintiff of its property without due process of law and denies to it the equal protection of the laws. The said provision requires the plaintiff to furnish gas of the standard prescribed, at a rate therefor which does not afford reasonable compensation for the service rendered and a reasonable return upon the fair value of the property used and useful in rendering such service. The production of gas of a standard of not less than 650 British thermal units on the distributing system would require the use of at least 1.5 gallons more of gas oil, per thousand cubic feet of gas manufactured, than the production of gas of the standard of an average of not less than 537 British thermal units per cubic foot as prescribed by the said Commission. It is com-
[fol. 28] mercially impossible for the plaintiff to comply with the said provision, and it is also an absolute physical impossibility for the plaintiff to comply therewith. It is not physically possible to manufacture and distribute gas to the consumers of the plaintiff which will not, on occasions, fall below 650 British thermal units per cubic foot under the said conditions. To make it possible for the plaintiff to furnish gas to all of its consumers on its distributing system conforming to the standard prescribed by the said provision, it would be necessary for the plaintiff to manufacture, or to cause to be manufactured, at the plants where the gas distributed by the plaintiff is produced, gas of a much higher British thermal content than the maximum prescribed by the said provision, and the maximum British thermal content required for gas sent out from any manufacturing plant devoted to the plaintiff's use in order to comply with the standard prescribed by the said provision at the point on the plaintiff's distributing system where the greatest variation occurs from the thermal content of such gas as sent out from such manufacturing plant must determine the thermal content at which all gas furnished to the plaintiff's consumers must be produced, in order that at no point on the plaintiff's distributing system where gas may be measured under normal conditions of temperature and atmospheric

pressure may the gas furnished fall below the said standard. The production of all the gas furnished by the plaintiff to its consumers, so that the same would conform to the maximum requirement of comparatively few points on [fol. 29] its distributing system, would be commercially impracticable, wasteful of material and labor, preventive of adequate and efficient service to most of the plaintiff's consumers, expensive beyond a point where any charge made to the plaintiff's consumers for gas service would be reasonable to them, and productive of no benefit to the plaintiff's consumers or to the plaintiff.

XLI. It is impossible to produce gas for distribution to the plaintiff's consumers of the maximum British thermal content required to comply with the standard prescribed by the said provision, without producing wide variations in the heating values of the gas supplied and without a resulting unsatisfactory service; gas of high heating value, such as that prescribed by the said provision, contains larger percentages of condensable hydrocarbons than those of a lower heating value, such as that prescribed by the said order of the said Commission in Case No. 108 of August 30, 1922; and, even if gas of such high heating value were produced with a fair degree of uniformity at the plant, it would be easily affected by changing temperature conditions in the holders and street mains, resulting in a more variable and less satisfactory service to the consumers of the plaintiff. The heating value prescribed by the said provision is exceptionally high; and gas supplied with such heating value, when applied to cooking utensils, incandescent lighting mantels, the interior of ranges and room heaters and all other heated surfaces, such as boiler tubes and water heater coils, would cause such heated surfaces to become coated with an increasing deposit of carbon, and a large percentage of the efficiency of such gas would be [fol. 30] lost, and serious hazards to life and property created. The said provision requires such standard to be maintained on every part of the distributing system of the plaintiff, when the gas is measured under normal conditions of temperature and atmospheric pressure; but the said provision nowhere defines what are normal conditions of temperature and atmospheric pressure, and the variety of conditions of temperature and atmospheric pressure

which obtain at different times of the year and at different places on the distributing system of the plaintiff make it impossible to define or fix what are "normal conditions of temperature and atmospheric pressure," within the meaning of the said provision.

XLII. In pursuance of and in compliance with the requirements of the said order of the said Commission in its Case No. 108 of August 30, 1922, the plaintiff proceeded to effect changes in its manufacturing plant and distributing system and in the methods of manufacture and distribution of gas furnished to its consumers, which were required in order to comply with the terms and conditions of the said order; and there have also been made, either by the plaintiff or by its consumers, changes in the adjustment of various gas appliances used by the plaintiff's consumers, in order to adapt them to the safe and efficient use of gas of the standard prescribed by the said order of the said Commission and furnished by the plaintiff. The plaintiff has necessarily and reasonably expended for labor and materials in making such changes in the readjustment of gas appliances at least the sum of $195,946. In order that gas of the standard prescribed by the said provision of Chap- [fol. 31] ter 899 of the Laws of 1923 may be furnished to the plaintiff's consumers under conditions assuring the safety of such supply, it would be necessary, before the plaintiff furnished gas conforming to such standard, to have all the various gas appliances used by the plaintiff's consumers changed and readjusted so as to adapt them to the use of gas conforming to such standard. Such appliances number more than 378,000. The said provision of the said Chapter 899 became effective immediately upon the approval thereof by the Governor of the State of New York, and required the plaintiff forthwith to comply with the provisions thereof. It would be physically impossible to change and readjust the gas appliances used by the plaintiff's consumers in order to adapt them to the safe use of gas of such standard within less than six months; and, if the plaintiff should attempt to comply with the requirement of the said provision and furnish gas of such standard before such changes were made, the supply of such gas would certainly result in great loss of life and property from asphyxiation and explosions. Such changes in the

adjustment of gas appliances to adapt them to the use of gas of the standard prescribed by the said Chapter 899 would impose upon the plaintiff the expenditure of a sum largely in excess of the sum already spent in changes to adapt gas appliances to the use of gas of the standard prescribed by the said order of the said Commission; and the use of gas of the standard prescribed by the said Chapter 899 would, in many cases, require the substitution of new appliances which could not be manufactured and delivered in less than a year.

[fol. 32] XLIII. The said provision of Chapter 899 of the Laws of 1923, prohibiting the furnishing in the City of New York of gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure is arbitrary, oppressive, unreasonable and unduly discriminatory, in that such a prohibition is imposed against the plaintiff and is not imposed against other gas companies engaged in the production and distribution of gas in other parts of the State of New York outside of the City of New York, under substantially similar conditions to those under which the plaintiff manufactures and distributes gas.

XLIV. The said Chapter 899 of the Laws of 1923 and the said Chapter 480 of the Laws of 1910, as supplemented and amended, are arbitrary, oppressive, unreasonable and unduly discriminatory, in that they confer power upon the said Commission to reduce the rates charged by the plaintiff below $1.00 per thousand cubic feet of gas, upon the complaint of others than the plaintiff, but prohibit the said Commission from increasing such rate for gas above $1.00 per thousand cubic feet, although in respect to other gas corporations in the State of New York subject to the jurisdiction of the said Commission and producing and distributing gas under circumstances substantially similar to those under which the plaintiff operates, the said Commission is given power and authority to prescribe a rate for gas in excess of that fixed by statute and in excess of $1.00, upon the complaint or application of any of such other gas companies.

[fol. 33] XLV. By Section 65 of said Chapter 480 of the Laws of 1910, it is provided that all charges made or demanded by any gas corporation subject to the jurisdiction of the said Commission for gas or any service rendered or to be rendered, shall be just and reasonable and not more than allowed by law or by order of the said Commission. By Section 74 of said Chapter 480 of the Laws of 1910, it is provided that when the said Commission shall be of opinion that a gas corporation within its jurisdiction is failing or omitting or is about to fail or omit to do anything required of it by law or by order of the Commission or is doing anything or is about to do anything or is permitting anything or is about to permit anything to be done, contrary to or in violation of law or of any order of the Commission, it shall direct counsel to the Commission to commence an action or proceeding in the Supreme Court of the State of New York, in the name of the Commission, for the purpose of having such violations or threatened violation stopped and prevented, either by mandamus or injunction, and that counsel to the Commission shall thereupon begin such action or proceeding, which must be heard summarily. By Section 75 of the said Chapter 480 of the Laws of 1910, it is provided that, if it be alleged and established in an action brought in any court for the collection of any charge for gas that a price has been demanded in excess of that fixed by the Commission or statute in the municipality where the action arises, no recovery shall be had therein, but the fact that such excessive charges have been made shall be a complete defense to such action.

[fol. 34] XLVI. By Section 58, Subdivision 1, of the said Chapter 480 of the Laws of 1910, it is provided that any corporation, other than a common carrier, railroad corporation or street railroad corporation, which shall violate any provision of the said chapter, or shall fail to obey, observe and comply with every order made by the Commission under authority of the said chapter, so long as the same shall be and remain in force, shall forfeit to the People of the State of New York a sum not exceeding one thousand dollars for each and every offense; every such violation to be a separate and distinct offense, and the penalty or forfeiture therefor to be recovered in an action as pro-

vided in Section 24 of the said chapter, which provides that such action must be brought in the name of the People of the State of New York and must be commenced and prosecuted to final judgment by counsel to the Commission.

XLVII. The plaintiff is advised and verily believes, that under the provisions of said chapter 899 of the Laws of 1923, the said Public Service Commission of the State of New York has no power to permit the plaintiff to increase the rate which it may charge for gas supplied, in excess of the maximum rate of $1.00 per thousand cubic feet prescribed by the said Act of 1923. If the plaintiff should so attempt to increase its said rate, it would be unable to collect the same; for it is provided by said Chapter 480 of the Laws of 1910 that the charging by any gas corporation of any rate in excess of that permitted by law shall be a complete defense to any action by such company against any consumer for any unpaid bill. Furthermore, it would be the duty of [fol. 35] the said Commission to prosecute the plaintiff for each such violation of law, and to endeavor to enforce and collect the numerous penalties perscribed by said law, and to cause suits in mandamus or for injunction to be brought against the plaintiff under Section 74 of said Chapter 480 of the Laws of 1910 for the purpose of preventing the plaintiff from so increasing its rates.

XLVIII. The plaintiff now has more than 553,000 consumers in the City of New York, to whom it is daily selling and distributing gas. The amount so sold and distributed in the year ending December 31, 1922, was 20,580,285,600 cubic feet. Many of said consumers are financially irresponsible and only temporary residents of New York. Monthly bills for gas are rendered to such customers by the plaintiff, and, unless such bills are promptly paid, the supply of gas to delinquent consumers is discontinued by the plaintiff, as authorized by law. If the plaintiff should make a charge to any consumer in excess of the statutory rate of $1.00 per thousand cubic feet, the plaintiff is informed and believes that such consumer would refuse to pay such charge, upon the pretext that the making of such charge is a complete defense to the plaintiff's entire claim against such consumer. If the plaintiff should thereupon discontinue the service to such consumers and remove the

meters, the plaintiff is advised and believes that it would be at once subjected to a multiplicity of suits from such consumers, to compel restoration of such meters and service, as well as to prosecution for the fines and penalties prescribed by said Act, and to suits at law for penalties [fol. 36] prescribed by the Transportation Corporations Law of the State of New York, as enacted by Chapter 219 of the Laws of 1909 and the acts supplementary thereto and amendatory thereof, for failure to furnish gas service to applicants therefor. If the plaintiff should make a charge in excess of $1.00 per thousand cubic feet each month to each of its consumers, the aggregate of the penalties so incurred in one year would amount to enormous sums, and the damage to the plaintiff would be irreparable and absolutely destructive of all its assets, franchises and property; and a refusal or failure to observe or comply with said statute would involve a risk of absolute ruin to the plaintiff and the entire destruction and confiscation of its property, by reason of the enormous fines to which it would be exposed. The plaintiff is, therefore, without adequate remedy at law for the redress of the wrongs suffered by the enforcement of said confiscatory rate and standard and of the said Chapter 899 of the Laws of 1923; and such injury to the plaintiff is irreparable, except for the intervention of a court of equity.

XLIX. The plaintiff is advised and believes, and therefore avers and claims, that there is no remedy, except in equity, to test adequately the validity of said Acts, and that in the absence of such remedy in equity, the penalties provided in said acts would be unreasonable and confiscatory, and would deprive the plaintiff of its liberty of contract, and of its property without due process of law and without just compensation, and would likewise deny to it the equal protection of the laws, in contravention of Section 10 of [fol. 37] Article 1 and of the Fourteenth Amendment of the Constitution of the United States; on which account the plaintiff invokes the jurisdiction of this Court, to protect it against the aforesaid threatened invasion by the defendants of its inherent rights under and guaranteed by the said Constitution.

L. The value of the business and property of the plaintiff which is involved in this suit is greatly in excess of $3,000.

LI. To the end that the plaintiff may have that relief which it can only obtain in a court of equity and that the defendants may each answer the premises, but not under oath or affirmation, the benefit whereof is hereby expressly waived by the plaintiff, it hereby prays:

1. That it be adjudged and decreed that a maximum rate of $1.00 per thousand cubic feet of gas sold by the plaintiff, in conjunction with or apart from the said standard of 650 British thermal units per cubic foot, is illegal and void, because in contravention of Section 10 of Article 1 and of the Fourteenth Amendment of the Constitution of the United States aforesaid, and that the provisions of the said Chapter 480 of the Laws of 1910 as amended and supplemented and Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from charging or receiving for gas manufactured and sold in the Borough of Manhattan, a sum per one thousand cubic feet in excess of the rate of $1.00 per one thousand cubic feet in conjunction with or apart from the said standard, are each likewise illegal and void.

2. That it be adjudged and decreed that a standard of gas, to be furnished by the plaintiff, of not less than 650 [fol. 38] British thermal units per cubic foot, is likewise illegal and void, and that the provisions of Chapter 480 of the Laws of 1910 as amended and supplemented and Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, are likewise illegal and void.

3. That it be adjudged and decreed that the plaintiff has no adequate remedy at law for the injury which will result from the enforcement of said acts, and that such injury will be irreparable.

4. That it be adjudged and decreed that the said Chapter 480 of the Laws of 1910, as amended and supplemented, or any other provision of law, or any regulation prescribed thereunder, in so far as it prohibits the plaintiff from put-

ting into effect forthwith a rate for gas distributed or sold by it less than that which will afford to it just compensation therefor, is likewise illegal and void.

5. That it be adjudged and decreed that the plaintiff be granted writs of injunction, both temporary and permanent, issuing out of and under the seal of this Honorable Court, against the defendants and their successors, restraining them and each of them and each of their officers, agents, servants and employes, and any and every person acting or attempting to act under and by virtue of the authority of the said Acts, or of any of them, or of any other provision of law:

(1) From in any way enforcing or attempting to enforce, [fol. 39] against the plaintiff, a rate for gas furnished by the plaintiff to its general consumers of not more than $1.00 per thousand cubic feet of gas sold, under the provisions of the said Acts or otherwise;

(2) From in any way enforcing or attempting to enforce against the plaintiff the provisions of the said Acts, in so far as they prohibit the plaintiff from charging or receiving for gas furnished in the Borough of Manhattan a sum per one thousand cubic feet in excess of $1.00, in conjunction with or apart from the said standard of gas;

(3) From in any way enforcing or attempting to enforce against the plaintiff a standard of gas furnished by the plaintiff of not less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, or the provisions of the said Acts, in so far as they prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure;

(4) From bringing any action or proceeding to enforce the said penalties against the plaintiff, or by mandamus or injunction or otherwise, to compel compliance by the plaintiff with the provisions of the said Acts, or any of them, relative to the said maximum rate of $1.00 and the said standard of gas;

(5) From doing any act or thing interfering with the [fol. 40] right or authority of the plaintiff forthwith to fur-

nish gas of any standard which it may lawfully furnish and to charge or receive for gas furnished by it any rate which it may lawfully charge or receive, any provisions of the said Acts or of any regulations prescribed thereunder, relative to the rate to be charged and received or to the standard of gas to be furnished by the plaintiff, to the contrary notwithstanding.

6. That the plaintiff may have such other, further or different relief as to the Court may seem meet and the nature of the case may require.

7. That your Honors grant unto the plaintiff a writ of subpœna ad respondendum, issuing out of and under the seal of this Honorable Court, to be directed to said defendants, commanding them and each of them, on a certain day and under a certain penalty to be therein inserted, to appear before your Honors in this Honorable Court and then and there full, true, direct and perfect answer to make to all and singular the premises, and further to stand, do, perform and abide by such further order and decree as to your Honors may seem meet.

Consolidated Gas Company of New York, by George B. Cortelyou, President. Shearman & Sterling, Solicitors for Plaintiff, 55 Wall Street, New York City. John A. Garver, William L. Ransom, Jacob H. Goetz, of Counsel.

[fol. 41] *Duly sworn to by George B. Cortelyou. Jurat omitted in printing.*

[fol. 42] EXHIBIT "A" TO BILL OF COMPLAINT

OPINION OF THE PUBLIC SERVICE COMMISSION FIXING THE PRESENT RATES AND CALORIFIC STANDARD

PUBLIC SERVICE COMMISSION, STATE OF NEW YORK

Case No. 79

Matter of Gas Rates in the CITY OF NEW YORK AND SUBURBAN TERRITORY

Case No. 79-G

Matter of Rates for Gas of The Consolidated Gas Company of New York

Case No. 79-H

Matter of Rates for Gas of The New York Mutual Gas Light Company

Case No. 79-I

Matter of Rates for Gas of The New Amsterdam Gas Company

Case No. 79-K

Matter of Rates for Gas of The Standard Gas Light Company of the City of New York

Case No. 79-N

Matter of Rates for Gas of The East River Gas Company of Long Island City

Case No. 79-P

Matter of Rates for Gas of The Northern Union Gas Company

Case No. 79-Q

Matter of Rates for Gas of The Central Union Gas Company

Case No. 108

Matter of Standards of Purity, Illuminating Power, and Heating Power of Gas and Standards for the Measurement Thereof in the City of New York and Suburban Territory

Opinion of the Commission

[fol. 43] The Commission adopted unanimously, on August 30, 1922, the following Opinion relative to the change in the standard of measuring the quality of gas in

New York City and certain suburban territory and also relative to the introduction of graduated or "block" rates for all companies and the particular rates to be charged by the Consolidated Gas Company and the affiliated companies on its gas-transfer system.

Orders were concurrently adopted by the Commission prescribing the gas rates to be charged by the New York and Queens Gas Company and the Bronx Gas and Electric Company, affiliated companies of the Consolidated Gas Company system but not inter-connected with its gas-transfer system; and also the rates to be charged by the Brooklyn Union Gas Company and its subsidiaries, and by the Queensborough Gas and Electric Company, the Brooklyn Borough Gas Company, the New York and Richmond Gas Company and the Kings County Lighting Company.

A memorandum Opinion was adopted by the Commission in the case of the Brooklyn Union Gas Company.

The Further pertinent facts appear in the Opinions adopted.

Ledyard P. Hale, Counsel (Colley W. Bell, Special Assistant Counsel) for the Commission.

John P. O'Brien, Corporation Counsel (M. M. Fertig, A. Judson Hyatt and Harry Hertzoff, Assistant Corporation Counsel), for the City of New York.

[fol. 44] F. S. Oxholm for the President of the Borough of Richmond.

John M. P. Thatcher and Frederick De Berard for the Merchants' Association of the City of New York; Mr. Thatcher also appearing for certain industrial users of gas.

Jabez E. Dunningham, Executive Secretary, for the City Parliament of Community Councils.

William L. Ransom, Charles A. Vilas, and Jacob H. Goetz for the Consolidated Gas Company of New York, the Astoria Light, Heat and Power Company, the Standard Gas Light Company, the New Amsterdam Gas Company, the East River Gas Company, the New York Mutual Gas Light Company, the Central Union Gas Company, the Northern Union Gas Company, the Westchester Lighting Company (within the City of New York), the Bronx Gas and Electric Company, and the New York and Queens Gas Company.

William L. Ransom, Jacob H. Goetz, and Colley E. Williams for the Queensborough Gas and Electric Company and the Brooklyn Borough Gas Company.

Jackson A. Dykman and Edward J. Crummey for the Brooklyn Union Gas Company and subsidiaries.

Frank H. Innes and Jacob H. Goetz for the New York and Richmond Gas Company.

[fol. 45] Samuel F. Moran for the Kings County Lighting Company.

Opinion of the Commission

By the Commission:

When this Commission assumed office on April 25, 1921, it found a condition respecting gas rates in the City of New York which was the subject of considerable public concern. This was due to the fact that, beginning with the year 1919, suits had been brought by virtually all the gas corporations in the City of New York to enjoin the enforcement of rates which had been fixed by the Legislature. The rate affecting nearly all of the companies was 80 cents per thousand cubic feet. Final or temporary injunctions had been granted in a number of cases, by authority of which many of the gas companies had established rates which they considered just, or which, in some cases, had been fixed by the Court as a condition to the granting of the temporary injunctions, or, in some instances, had been set up by the companies with the sanction of the then existing Public Service Commission.

In April, 1921, the two principal gas furnishing companies, the Consolidated Gas Company and the Brooklyn Union Gas Company, were charging at the rate of $1.50 per thousand cubic feet. This extreme rate (for New York City) was due chiefly to the fact that the price of gas oil had increased more than 100 per cent. In June, 1921, these companies, on making more advantageous gas oil contracts, filed schedules reducing their rates to $1.25 per thousand cubic feet.

[fol. 46] In only three cases has this Commission permitted a higher rate than was in existence at the time it took office. One was in the case of the Brooklyn Borough Gas Company, which because of an extremely burdensome gas

oil contract was permitted to increase its rate to $1.50 from May to September 1st, 1921. At the close of this period, we reduced the price to be charged by this company to $1.35, being five cents lower than the rate at the time the Commission assumed office. Another instance is that of the Newtown Gas Company which was furnishing gas at $1.00, but on the filing of a court decree declaring this rate confiscatory and permitting the company to charge a higher rate, it filed a price of $1.25. This was reduced by the Commission to $1.15, the lowest rate at which, in the early part of this year, it seemed proper to require the company to render service.

The third case was that of the Westchester Lighting Company which operates chiefly outside the north boundary of the City but it does serve a portion of the 24th Ward of the Borough of The Bronx. 22 candle power gas at 80 cents was required by statute within the City, and the Westchester Company bought from Northern Union Gas Company. After the United States Supreme Court had declared the 80-cent rate confiscatory in the Northern Union case, the Westchester Company applied to the Public Service Commission direct for permission to charge a rate equal to that which the Northern Union Company charged for the same gas. As the increase under the Supreme Court ruling was then allowed, so now a reduction equal to that of Northern Union is now ordered.

[fol. 47] Increase Suspended by the Commission

Under the Public Service Commission Law, as amended by Chapter 134, Laws of 1921, this Commission was given power to suspend rates filed by utility companies but required to immediately proceed with the consideration of a case for the purpose of establishing a proper rate. During the few months subsequent to the date when this Commission took office a number of the gas companies filed schedules of higher rates. In every case these higher schedules were suspended by the Commission. Companies filing increases which were suspended in whole or in part, were The New York Mutual Gas Light Company, Standard Gas Light Company, New Amsterdam Gas Company, East River Gas Company of Long Island City, New York and

Queens Gas Company, Bronx Gas and Electric Company, Newtown Gas Company, and Queens Borough Gas and Electric Company. Proceedings have been had, and in some cases concluded, in respect to the New York and Queens Gas Company, Bronx Gas and Electric Company, and Queens Borough Gas and Electric Company. In the cases of the other companies mentioned, while proceedings were started, they have been held awaiting the results of negotiations more generally described in this memorandum.

Proceedings Instituted

In view of these conditions, the Commission upon its own motion instituted formal proceedings for the purpose of investigating the rates charged by the various gas cor- [fol. 48] porations in the City of New York, and their operating expenses, revenues, service, properties and investment, and made an Order for a hearing to be held before it in Case No. 79 for that purpose.

As a part of that proceeding, the Commission also made an Order on June 8, 1921, requiring the gas corporations in the City of New York to file copies of various contracts, statistical statements and other detailed information specified in the order, and to file also monthly reports of manufacturing operations thereafter. A preliminary hearing in Case No. 79 was held on June 16, 1921.

It was also determined by the Commission that, as part of Case No. 79, an "inquiry with particular reference to the question of block rates" or a graduated scale of rates for industrial consumers, should be undertaken.

The Commission in Case No. 108 has conductd an investigation in respect to the standards of gas to be furnished.

In addition to the foregoing, the Commission instituted and concluded a proceeding in respect to the standard of gas being furnished by the Kings County Lighting Company, and also instituted a proceeding (now pending) on its own motion requiring the New York and Richmond Gas Company to show cause why its rates should not be reduced.

While these various comprehensive proceedings were pending before the Commission concerning gas rates and

service in the City of New York, complaints were filed by [fol. 49] the Mayor of the City of New York against all of the gas corporations, concerning the rates charged by them, with the following exceptions: The Newtown Gas Company, Brooklyn Borough Gas Company, Queens Borough Gas and Electric Company, and The Astoria Light, Heat and Power Company.

In order that the Commission may deal comprehensively with the matters of standards, service and rates, it has determined to consolidate the several proceedings before it so that the record in the consolidated proceedings may show the facts brought forth in each proceeding which the Commission has decided to take into consideration in its decision covering both rates and standards.

Industrial Use and Rates Therefor

Although gas has been originally used almost entirely for illuminating purposes both by private and business consumers, a revolution in its use has taken place in the last twenty years so that it is now used to the extent of almost 90 per cent of the entire output, for heating and power purposes. In that time the use of gas by industries hotels and other business enterprises, has represented an important part of the gas consumed. The increase in prices, before noted, has caused these industrial consumers to call upon the Commission for the establishment of some method through which the cost of gas to them could be reduced, as they claimed that the prices charged were adding greatly to the cost of the manufacture of merchandise and other [fol. 50] service, and were prohibitive. It was also represented by these industrial users that unless some relief could be secured they would have to revert to the use of coal, and in some instances it was contended that their enterprises would have to be removed from New York City. This feature of the gas problem imposed upon this Commission the necessity of duly considering the merits of the claims made by industrial users. Believing that there were many questions involved in this matter of industrial use which could be more satisfactorily understood and adjusted if discussed informally between the gas companies and the users themselves, the Commission called a public meeting of these interests and at this meeting suggested that they

appoint committees to consider the questions they felt should be discussed and report to the Commission. It was distinctly stated at the meeting referred to that no recommendations made would be binding upon the Commission, and that one prerequisite of any consideration that might be given to the subject by the Commission would be that there should be no increase in the price of gas to the household users. This same attitude was assumed by the gas companies. A joint committee consisting of representatives of the Merchants' Association, the industrial consumers, and the gas companies, with the Commission's Assistant Engineer in charge of Gas Matters as a member, was appointed for this purpose. The report of this committee was made last December, and upon its receipt the Commission resumed formal hearings before it for the purpose of examining further into the matters covered by the report. [fol. 51] On the basis of the evidence taken, the Commission believes that the most scientific method of prescribing rates for gas is one in which the cost of rendering service to each particular consumer is determined by the actual cost to the company for rendering that service. It is palpable that it would not be practicable to endeavor to impose such a standard of rate making, and no Commission, anywhere, has thus far attempted to do so, although much consideration has been given to the subject. The unwillingness to do this, in which this Commission partakes, is based upon the inadvisability of what would undoubtedly be regarded by the public as an unwarranted departure from the historical and traditional flat rate. Evidence given by prominent representatives of gas companies indicates that the gas companies themselves are not prepared to go to the extent of an absolutely scientific rate schedule. In principle, the Commission agrees with the view of the Joint Committee on Block Rates that the lesser cost to the company in serving the large industrial consumers justifies a differential based on the quantity of consumption. It would, therefore, appear that the course which will prove the fairest, and not unacceptable to the consumers, is the one that will reduce prices to the smaller consumer and at the same time recognize the differential before noted. A system of rates on this basis will therefore be incorporated in the Order accompanying this memorandum.

Standards: Candle Power and Calorific or Heating Standards

Another most important phase of the gas situation presented itself to this Commission. This was the proper [fol. 52] standard of gas to be furnished. For many years the gas companies in New York City have been furnishing a 22 candle-power standard, under a legislative Act passed in 1905. Throughout all the rest of the state, including the counties adjoining the City of New York, a 585 British Therman Unit gas has been furnished, this standard having been fixed by the Public Service Commission, Second District, in 1916. Furthermore, the standard of gas furnished in every other important city, and in almost every other locality in the United States, was on the British Thermal Unit basis and not on the candle power basis. Why this dissimilarity should exist could not be explained except for the unwillingness of the authorities to change the New York City standard, although a move in this direction was made in the year 1917 by the former Public Service Commission, First District. It seemed incumbent on this Commission to study this question most carefully, and after doing so decide what should be the standard of gas to be furnished in the City of New York. If a candle-power standard were necessary for New York City, then why not for Albany, Utica, Syracuse, Rochester, and in Buffalo, where manufactured gas was used in the latter city. In its opinion, in the case of Newton, et al. vs. Consolidated Gas Company of New York, filed March 6, 1922, the Supreme Court of the United States said, "The calorific quality had become more important to most consumers than the illuminating one."

In respect to the standard of gas to be furnished, enough has already been said to indicate the advisability of an [fol. 53] uniform standard for the State of New York. The elaborate report which the Commission has prepared, and which will be spread upon its records, indicates clearly that the illuminating standard is an obsolete and uneconomical standard, and that better (because more uniform) service is obtainable through a calorific or heat standard. The facts concerning the relative merits of these standards have been incorporated in the record through the examination

of witnesses, men of eminence in the gas business, who were representatives of public utility commissions of other states which have changed from the candle-power to the calorific standard and others directly concerned in the regulation and management of extensive gas enterprises. The testimony of these men, covering at it has every phase of the question of standards used, appears to the Commission conclusive upon this question. The evidence taken in Case No. 108 shows that the B. T. U. standard, in addition to improving the efficiency in the use of gas by the consumers, will also effect certain economies in the cost of operation. The Commission feels that such economies in operating cost should, at this time, inure to the benefit of the consumers.

Rates to be Authorized

The principal problem before the Commission has been the establishment of fair rates to be charged, without going through the process of protracted proceedings. A consideration of this question brought the Commission to the inevitable conclusion that to proceed with full hearings in all these cases at the same time would be utterly impossible. [fol. 54] This, however, was not the major objection to this course. It was the fact of the very great length of time that would normally be required in which to determine these cases through hearings. Experience has shown that, even in the case of small companies, where the evidence to be presented is not so voluminous or as complicated as in that of the larger concerns, the possibility of hurrying those cases to a quick conclusion is remote. The Commission is also not unmindful of the very great expense caused to the consumers through costly rate proceedings and court actions. It is a fallacy held by some that these expenses fall upon the companies. They are in the end borne by the consumers who must pay for these expenses in the rates charged to them and who must also pay in the tax rate for the expenses incurred by public departments in prosecuting these cases. Consequently, the Commission decided that the best way to handle these cases in the City of New York would be through a series of conferences in which the Commission, the City of New York and the companies would be adequately represented. Conferences of this character

were projected by the Commission, and a cordial invitation extended to the City of New York to participate in them. Preliminary conferences were held, in which the City took part, but later, after much delay, it declined to participate. While the Commission regretted the fact of the City's failure to be a party to these negotiations, there was no other course than to proceed on its own account. These conferences have extended over a period of several months with the following results:

[fol. 55] Conferences have been held with the representatives of the Consolidated System of Companies, and in the Orders accompanying this memorandum, the Commission prescribes the gas standards and the gas rates for the companies comprising that system which consists of the Consolidated Gas Company of New York, The Astoria Light, Heat & Power Company, the New Amsterdam Gas Company, The East River Gas Company of Long Island City, the Central Union Gas Company, The Northern Union Gas Company, the Standard Gas Light Company of the City of New York, and The New York Mutual Gas Light Company.

There are a number of differences of operating costs, revenues, earnings and property investment among these companies, which would justify the fixing of rates for each company independently. However, considerations both of public policy and necessity justify the fixing of uniform rates to be charged by these companies as a group rather than as segregated companies. The areas served by some of these companies overlap each other, and the charging of different rates for the same class of service within a single area is highly undesirable.

In prescribing gas rates in the past, the Legislature adopted the policy of fixing an uniform rate for the gas companies in the Consolidated system whose service was inter-connected. We have, therefore, concluded to fix rates for these companies as a group, leaving it to them to apply to the Commission for any modification required by conditions peculiar to any individual company which may require the differentiation of such company from any other [fol. 56] companies forming the group.

At the same time, we believe that the corporate barriers now separating the companies of this system should be removed, and that a complete merger of all should be effected. The arguments in favor of this plan need not be elaborated here, but the Commission will in the furtherance of a public duty, urge this course upon the companies in the system and endeavor to bring about the change indicated.

The rates which the Commission now proposes to prescribe as to these companies involve a radical reduction from the present rates, ranging from ten cents (10c) to thirty cents (30c) per M cubic feet, according to the quantities of gas consumed as follows:

First 100,000 cubic feet of gas, per meter per month, $1.15 per M. cu. ft.

Next 200,000 cubic feet of gas, per meter per month, $1.10 per M. cu. ft.

Next 300,000 cubic feet of gas, per meter per month, $1.05 per M. cu. ft.

Next 400,000 cubic feet of gas, per meter per month, $1.00 per M. cu. ft.

All over 1,000,000 cubic feet of gas, per meter per month, 95c per M. cu. ft.

The sales of gas by these companies amounted during the year ending February 28, 1921, to about thirty-three billion cubic feet.

[fol. 57] In fixing the new schedule of rates set forth in the accompanying order, the first consideration of the Commission has been to extend the benefit of the economy through the substitution of a calorific standard for an illuminating standard to all of the general consumers of the company, irrespective of the quantity consumed, and not to any particular class of consumers.

Computation of the return to be afforded through the new rates is based upon the investment of these companies in the property used by them in their gas business, which is divided as follows, the amounts stated including working capital:

Consolidated Gas Company of New York	$56,597,757 62
The Astoria Light, Heat and Power	28,703,682 00
New Amsterdam Gas Co. (incl. The East River Gas Company of Long Island City)	27,092,553 80
Central Union Gas Co	11,319,495 21
Northern Union Gas Company	5,505,114 90
The Standard Gas Light Co.	14,748,192 37
The New York Mutual Gas Light Co.	11,057,916.07
	$154,825,011 97

Substantially more than one-half of the foregoing properties are taken in the above statement at their original costs, the balance of the properties (in use on October 1st, 1919) are taken at their reproduction cost computed at prices prevailing on January 1, 1914, as found in the recent rate actions of these companies in the United States District Court for the Southern District of New York, plus net additions to June 30, 1922. The reproduction costs at the low unit prices prevailing on January 1, 1914, were found by the Special Master in these cases to represent at least the investment in the properties.

[fol. 58] While this Commission is not necessarily bound by the valuations determined in the proceedings in the Federal Court, it does consider for the purposes of the adjustment under consideration, that as these valuations have been subjected to the most vigorous analysis and criticism of the State of New York and the City of New York in those proceedings, the fact that they have been approved by other tribunals cannot be without force and effect in the discussion of them.

In any proceeding pending before the Commission the companies have the right to submit valuations on a reproduction basis, and due consideration of such a basis must be given by the Commission. The necessity of considering any such basis of valuation which would be very much higher, according to the present quotations, than the book value, was therefore laid aside, and the basis of valuation held principally to that of book value.

In the conferences certain questions were raised by the Commission at the outset as to the foregoing valuations,

being principally with regard to the value of the franchises and rights of the Consolidated Gas Company, amounting to $7,781,000.00, and the value of the Fourteenth Street and Forty-second Street plants (including land and buildings) amounting to $5,148,764.86. Other differences relating to working capital, organization and development expenses prior to construction and cost of financing in the case of the subsidiary companies, were also debated.

In respect to the franchise and rights, which represent a claimed invesment of $7,781,000.00, the Commission can- [fol. 59] not ignore the fact that the committee of the New York State Senate (1886) which made an exhaustive investigation into the affairs of the gas companies, particularly with reference to the consolidation of those companies effected in 1884, found the value placed upon these franchises and rights to be "not more than their fair aggregate value;" and it was also found, by the United States Supreme Court (in Willcox vs. Consolidated Gas Company 212 U. S. 19) to be a value which the State was "bound to recognize * * * as part of the property upon which a reasonable return can be demanded." It was also included in the Company investment, as found by the Master and by the Court in the recent Federal Court proceedings (267 Fed. Rep. 231, 240).

In respect to the Fourteenth Street and Forty-second Street plants it should be said that the daily capacity of these plants is 9,500,000 cubic feet of gas. The combined capacity of all the manufacturing plants of the Consolidated System Companies, including the Fourteenth and Forty-second Streets plants, provide a reserve capacity which, in the light of past experience, is no more than adequate for the practical requirements or uninterrupted service to the public. In fact, if the extreme temperature conditions, coupled with the scarcity of coal, which were experienced in the winter of 1917-1918, were to recur in the ensuing winter the reserve would be inadequate to meet such an increase in the maximum day's output as occurred during that winter.

Should we eliminate the investment in those plants from the combined investment as stated above, it would be neces- [fol. 60] sary to provide substitute plant capacity of adequate and modern design to the extent of about 10,000,000 cu. ft. of

gas per day, in order to maintain a reserve capacity deemed to be necessary from the standpoint of insurance against interruption of gas service in the City of New York. Such substitute coal gas plant capacity would require an investment of at least $5,000,000.00, and the substitution of this amount in the investment of the companies would, of course, increase the aggregate investment as stated above.

We reserve, however, for future determination, if occasion arises, the question of franchises and whether the Fourteenth Street and Forty-second Street coal-gas plants as at present constituted or substitute plants of corresponding capacity should be included in the properties used and useful, under the conditions which may be found to exist at the time of any future determination.

Considering, therefore, the nature of the adjustment which the Commission is desirous of bringing about in the public interst, especially in order to facilitate the earliest possible reduction in the rates effected, the Commission believes the investment heretofore mentioned, of $154,825,011.97, may be fairly accepted as the sum upon which, at least, the companies are entitled to earn a fair return.

Although the facts known to the Commission and confirmed by the analysis of exhibits in the conferences indicate that the rates now fixed by the Commission could hardly be deemed adequate if based only upon present conditions [fol. 61] and present costs of manufacture, distribution, taxes, maintenance of property, and return upon investment, the Commission feels confident that upon the greater stabilization of prices and the realization of certain prospective reductions in expense, the rates hereby put in force will approach the requirements of adequacy.

The rates to be established are to be effective for a period of one year. The Commission deems it of great public interest that the benefit of such a reduction be made available to the consumers as soon as possible, without dilatory proceedings. Nevertheless, the Commission does not wish to foreclose any interested party from presenting any further proofs which would warrant the Commission in directing a continuance of the proceedings, and the Commission's Order makes a suitable reservation of any right of any interested party in that respect.

Adopted unanimously.

[fol. 62] EXHIBIT "B" TO BILL OF COMPLAINT

Order of the Public Service Commission Prescribing the Present Rates of the Consolidated Gas Company and Affiliated Gas Companies.

STATE OF NEW YORK PUBLIC SERVICE COMMISSION

At a session of the Public Service Commission held in the city of New York on the 30th day of August, 1922.

Present: Hon. William A. Prendergast, Chairman; Hon. William R. Pooley, Hon. Charles Van Voorhis, Hon. Oliver C. Semple, Hon. Charles G. Blakeslee, Commissioners.

Case No. 79

Matter of Gas Rates in THE CITY OF NEW YORK AND SUBURBAN TERRITORY

Case No. 79-G

Matter of Rates for Gas in THE CONSOLIDATED GAS COMPANY OF NEW YORK

Case No. 79-H

Matter of Rates for Gas of THE NEW YORK MUTUAL GAS LIGHT COMPANY

Case No. 79-I

Matter of Rates for Gas of the NEW AMSTERDAM GAS COMPANY

Case No. 79-K

Matter of Rates for Gas of THE STANDARD GAS LIGHT COMPANY OF THE CITY OF NEW YORK

Case No. 79-N

Matter of Rates for Gas of THE EAST RIVER GAS COMPANY OF LONG ISLAND CITY

Case No. 79-P

Matter of Rates for Gas of The Northern Union Gas Company

Case No. 79-Q

Matter of Rates for Gas of The Central Union Gas Company

Order as to Consolidated Gas Company et al.

[fol. 63] Hearings in New York City

Hearings having been duly had in the above proceedings concerning the rates, charges and classifications of service of the various gas corporations in the City of New York and suburban territory, including the Consolidated Gas Company of New York, The Astoria Light, Heat and Power Company, the New Amsterdam Gas Company, the East River Gas Company of Long Island City, the Central Union Gas Company, the Northern Union Gas Company, The Standard Gas Light Company of the City of New York, The New York Mutual Gas Light Company and the Westchester Lighting Company; and hearings have also been had by the Commission in Case No. 108 in the matter of standards of purity, illuminating power and heating power of gas, and the standards for the measurement thereof, in the City of New York and suburban territory; and an order having been made by the Commission in said Case No. 108, dated August 30, 1922, applicable to the corporations above named, which order is by reference made a part hereof; and the Commission having made investigation into the service, rates, properties and investments of the corporations above named; and it appearing to the Commission that the combined investment in the properties of the above named corporations (except the Westchester Lighting Company), used and useful in their gas business, as of June 30, 1922, was and is at least the sum of $154,825,011.97, and that the said gas corporations were and are entitled to earn a fair return on at least the said sum; and the Commission being of the opinion that reduced rates should be fixed for [fol. 64] gas to be charged by the said corporations as hereinafter set forth, and that the said corporations should be

required to establish classifications of service and graduated rates in connection therewith as hereinafter set forth, it is

Ordered that on and after the 1st day of October, 1922, and until the 30th day of September, 1923, and thereafter until the Commission shall otherwise order, the just and reasonable rates to be charged by the Consolidated Gas Company of New York, The Astoria Light, Heat and Power Company, the New Amsterdam Gas Company, The East River Gas Company of Long Island City, the Central Union Gas Company, the Northern Union Gas Company, The Standard Gas Light Company of the City of New York, The New York Mutual Gas Light Company and the Westchester Lighting Company, respectively, to all of their respective consumers in the City of New York, other than the City of New York, and the classifications of the service furnished to such consumers, shall be as follows:

First 100,000 cubic feet of gas, per meter per month $1.15 per M cu. ft.

Next 200,000 cubic feet of gas, per meter per month $1.10 per M. cu. ft.

Next 300,000 cubic feet of gas, per meter per month $1.05 per M cu. ft.

Next 400,000 cubic feet of gas, per meter per month $1.00 per M cu. ft.

All over 1,000,000 cubic feet of gas, per meter per month $.95 per M cu. ft.

[fol. 65] Further ordered that this order shall take effect October 1, 1922, and shall continue in force until September 30, 1923, and thereafter until the Commission shall otherwise order, and that, within ten days from the date of the service of a copy thereof, each of the above named gas corporations shall notify this Commission in writing whether the terms and conditions of this order are accepted and will be obeyed.

Further ordered that this Order shall be without prejudice to the right of any interested party, to apply to the Commission for a continuance of the hearings in these proceedings for the purpose of presenting evidence relating to the subject-matter of this Order.

By the Commission.

(Signed) Francis E. Roberts, Secretary. (Seal.)

[fol. 66] EXHIBIT "C" TO BILL OF COMPLAINT

Order of the Public Service Commission Prescribing a 537 British Thermal Unit Standard of Quality for Gas Supplied in New York City.

At a meeting of the Public Service Commission, State of New York, held in the city of New York on the 30th day of August, 1922.

Present: Hon. William A. Prendergast, Chairman; Hon. William R. Pooley, Hon. Charles Van Voorhis, Hon. Oliver C. Semple, Hon. Charles G. Blakeslee, Commissioners.

Case No. 108

In the Matter of Standards of Purity, Lighting Power, and Heating Power of Gas and Standards of Measurement Thereof in the CITY OF NEW YORK AND SUBURBAN TERRITORY.

Order Fixing Standards of Purity, Power, and Pressure

The matter of the standards of purity, illuminating power, and heating power of gas, and standards for measurement thereof, in The City of New York and suburban territory being before the Commission for determina-
[fol. 67] tion; and hearings having been held thereon by the Commission, upon its own motion, pursuant to the statute, on the 6th, 7th, 14th, 17th, 24th, 27th and 28th days of February, 1922, the 3rd, 6th, 10th, 13th, 14th, 27th, 28th and 30th days of March, 1922, and the 26th day of May, 1922; the following having appeared herein: Ledyard P. Hale, Esq., Counsel for the Public Service Commission (Colley W. Bell, Esq., Special Assistant Counsel); The City of New York by John P. O'Brien, Esq., Corporation Counsel and M. M. Fertig, Esq., A. Judson Hyatt, Esq., and Harry Hertzoff, Esq., Assistant Corporation Counsel; The President of the Borough of Richmond by T. S. Oxholm, Esq.; The Merchants Association of the City of New York by F. B. De Berard, Esq.; Certain Industrial Consumers by John M. P. Thatcher, Esq.; City Parliament of Community Councils by Jabez E. Dunningham, Executive

Secretary; Representatives of various Community Associations and Individual consumers; Brooklyn Union Gas Company, The Newtown Gas Company, Flatbush Gas Company, Woodhaven Gas Light Company, Jamaica Gas Light Company, and Richmond Hill and Queens County Gas Light Company by Cullen and Dykman (Jackson A. Dykman, Esq., and Edward J. Crummey, Esq., of Counsel); Westchester Lighting Company by F. A. Stratton, President; Kings County Lighting Company by Samuel F. Moran, Esq.; New York and Richmond Gas Company by Frank H. Innes, Esq., and Jacob H. Goetz, Esq.; The Consolidated Gas Company of New York, The Astoria Light, Heat and Power Company, The New Amsterdam Gas Company, The East River Gas Company of Long Island City, [fol. 68] Central Union Gas Company, Northern Union Gas Company; The Standard Gas Light Company of the City of New York; The Mutual Gas Light Company, Bronx Gas and Electric Company, by Witman, Ottinger and Ranson (William L. Ranson, Esq., and Jacob H. Goetz, Esq., of Counsel) and Sherman and Sterling (Charles A. Vilas, Esq., of Counsel); Queens Borough Gas and Electric Company and Brooklyn Borough Gas Company by Witman, Ottinger and Ranson (William L. Ranson, Esq., Jacob H. Goetz, Esq., and Colley E. Williams, Esq., of Counsel); and the Commission being now of the opinion that the standard of 22 candle power, prescribed by Chapter 736 of the Laws of 1905 and Chapter 125 of the Laws of 1906, as amended, is unreasonable, uneconomical, and improper, and that the continuance of such a standard of quality and measurement, based upon the heating power of gas, as hereinafter more particularly specified, should now be fixed by the Commission, it is hereby

Ordered:

I. That on and after October 1, 1922, each gas corporation supplying manufactured gas in the Boroughs of Manhattan, Brooklyn, The Bronx, Queens and Richmond, comprising the City of New York, and in the franchise territory of the Queens Borough Gas and Electric Company, in the County of Nassau, shall in lieu of the existing standard or standards, furnished to its consumers a quality of gas which shall comply with the following requirements:

[fol. 69] (a) Containing not more than 15% inert constituents.

(b) Containing not more than a trace of sulphuretted hydrogen to be determined as hereinafter provided.

(c) Containing not more than 30 grains of sulphur, nor more than 5 grains of ammonia in each 100 cubic feet of gas, corrected to a temperature of 60 degrees Fahrenheit and a pressure corresponding to a thirty inch (30") column of mercury.

(d) Under conditions of complete combustion and corrected as in paragraph "(c)", the gas furnished shall have a total heating value on a monthly average (made up of the average of the daily averages) of not less than 537 British Thermal units per cubic foot, and a daily average (made up of the average of the daily averages) of not less than 525 British Thermal units per cubic foot on any three consecutive calendar days in any month; the daily average for any such day to be ascertained and computed by averaging the results of not less than three official tests taken, at intervals of not less than three hours, on each such day, pursuant to the provisions of this Order, each of which tests shall be communicated to the corporation within twelve hours of its completion. The heating value of the gas furnished durng a calendar month shall not, on any three consecutive calendar days have a maximum variation upward of more than five per cent of the monthly average heating value.

II. (a) That each corporation shall maintain as measured at the consumers' end of the company's service pipe to any consumer, a minimum pressure of gas which shall in no case be less than two inches (2") water column on two (2) consecutive days.

[fol. 70] (b) The maximum pressure of gas furnished by each such corporation, as measured at the consumers' end of the company's service pipe to any consumer, shall not exceed six inches (6") water column on two (2) consecutive days, unless the consumer or consumers supplied from such service pipe have made a specific request in writing — a pressure of six inches (6") or in excess of six inches (6") water column. This provision shall not be construed as imposing any obligation on the company to furnish gas at a pressure of six inches (6") water column or more.

(c) The maximum daily pressure variation, as measured at the consumers' end of a company's service pipe to any consumer shall not exceed two inches (2") water column on two (2) consecutive days.

(d) The maximum momentary pressure variation (defined as a constant increase or decrease of pressure, practically instantaneous and not recurring with regular periodicity or frequency, nor necessarily with the same amplitude) at the consumers' end of the company's service pipe to any consumer shall not exceed a total range of eight-tenths inches (8/10") water column on two (2) consecutive days.

(e) The maximum pulsating pressure variation (defined as a constant increase or decrease of pressure of short duration, practically instantaneous and recurring with regular periodicity or frequency and usually with approximately the same amplitude) at the consumers' end of the company's service pipe shall not exceed a total range of five-tenths inches (5/10") water column on two (2) consecutive days.

[fol. 71] IV. That each such corporation engaged in the manufacture or distribution of gas shall, subject to the approval of the Commission, within sixty (60) days from the effective date of this Order, provide and maintain a testing station or stations at a point or points distant at least one (1) mile from the place of manufacture or distribution. Gas Testing Stations shall be provided with all suitable apparatus, equipment, reagents and facilities for testing and analyzing gas, in accordance with the provisions of this Order, and shall comprise the following with all necessary accessories and appurtenances:

(a) An approved type of gas calorofic meter set.

(b) An approved type of apparatus for the determination of and test for sulphuretted hydrogen.

(c) An approved type of apparatus for the determination of total sulphur and ammonia in gas.

(d) An approved type of apparatus for determining the composition of the gas.

(e) An approved type of recording pressure gauge.

Station and station equipment shall be kept in good condition, ready for use at all reasonable hours, and access shall be allowed to representatives of this Commission for the purpose of making gas tests and gas analyses at any time.

IV-A. That each corporation shall make daily tests of the calorific value of the gas and its sulphuretted hydrogen content at the approved testing station or stations.

[fol. 72] V. That each such corporation at its approved testing station or stations shall make analyses of its gas and determinations of the total sulphur and ammonia content at least once each month and when otherwise required by this Commission.

VI. That standard forms approved by this Commission shall be used for recording all tests and analyses made by such corporations and shall be retained as permanent chronological records in the stations where made for a period of two (2) years from the recording date.

VII. (a) That commencing October 1, 1922 each such gas corporation, upon the request of a consumer using open-flame burners for illumination, shall furnish, and install, if requested, mantle burners to replace such open-flame burners, such mantle burners to be so furnished and, if requested, so installed at cost, for a period of eight (8) months from October 1, 1922, and that all necessary adjustments to appliances shall be done free of charge to the user of such appliances.

(b) That the change from the existing candle power standard to the standard fixed in paragraph I herein shall be in effect on and after October 1, 1922, as hereinbefore more particularly provided; and that each such gas corporation shall make such changes in its practices, methods, appliances, property, service and standards as may be deemed necessary and proper to effect the change from its present standard to the standard fixed as effective on and after October 1, 1922.

[fol. 73] Hydrogen Sulphide Determination

VIII. (a) That a gas shall be considered to contain no trace of hydrogen sulphide when tested as follows: If a strip of white paper moistened with solution containing 5% by weight of acetate of lead, and exposed to a current of gas flowing at a rate of about five cubic feet per hour, does not after 30 seconds of such exposure become discolored, the gas shall be considered to contain no hydrogen sulphide.

General Provisions

IX. (a) That the standards of gas herein provided for shall supersede the standard for the illuminating power of gas and any other existing standards which may heretofore have been fixed by general or special statute or by an Order of a Public Service Commission.

(b) The monthly average calorific value of the gas in any calendar month shall be a computation of the daily averages of all calorific tests made during the month by employees of this Commission.

(c) All gas which must of necessity be distributed under a pressure exceeding 5 pounds per square inch shall be tested before compression. In cases where various gas systems are interconnected, the Commission, upon application of two or more allied companies or two or more branches of the same company, may approve a testing point common to the applying parties.

[fol. 74] X. That upon the acceptance of this Order by the Kings County Lighting Company, an Order entered by the Commission in Case No. 108-A on March 23, 1922, as amended by an Order entered in Case No. 108-A on April 25, 1922, shall be deemed abrogated and set aside as October 1, 1922, and the provision of this Order shall become immediately effective; and that upon the acceptance of this Order by the Brooklyn Borough Gas Company, the Order entered by the Public Service Commission for the First District in its Case No. 2320 on July 2, 1920, shall be deemed abrogated and set aside and the provisions of this Order shall immediately become effective.

XI. That upon the acceptance of this Order by the Queens Borough Gas and Electric Company, the Order entered by the Public Service Commission for the Second District, in Case No. 1502 on October 11, 1916, applicable to the franchise territory of that company in Nassau County, shall be deemed abrogated and set aside as of October 1, 1922.

XII. That this Order shall take effect on the date specified herein, and shall continue in effect until changed, modified or abrogated by this Commission, and that within ten (10) days from the service of a copy hereof each gas cor-

poration subject to the jurisdiction of this Commission, manufacturing or supplying gas within the City of New York, or in the territory served by the Queens Borough Gas and Electric Company in Nassau County, shall notify this Commission whether the Order is accepted and will be obeyed.

By the Public Service Commission.
(Signed) Francis E. Roberts, Secretary.

(Here follows Exhibit D to Bill of Complaint, marked side folio pages 75 and 76)

[fols. 76a & 77] In United States District Court

[Title omitted]

Answer of Attorney General

The defendant, Carl Sherman, as Attorney General of the State of New York, for his answer to the bill of complaint herein, alleges:

First. Denies that he has any knowledge or information sufficient to form a belief as to each of the allegations contained in the paragraphs of the said bill of complaint marked and numbered "I," "II," "III," "XI," "XVI," "XVII," "XVIII," "XIX," "XX," "XXI," "XXII," "XXIII," XXVII," "XXVIII," "XXIX," "XXXI," "XXXII," "XXXIII," "XXXIV," "XXXV," "XXXVI," "XXXVII," "XXXVIII," "XXXIX," XLII" and "XLVIII," except that the defendant admits the incorporation of the plaintiff and the consolidation of gas companies doing business in the City of New York through such incorporation.

[fol. 78] Second. That the defendant further answering the bill of complaint herein, and upon information and belief, denies each and every allegation contained in the paragraphs thereof marked and numbered "XXX," "XL," "XLI," "XLIII," "XLIV" and "XLIX."

Third. That the defendant admits the enactment by the Legislature of Chapter 480 of the Laws of 1910 as supplemented and amended by several acts, including Chapter

EXHIBIT D TO BILL OF COMPLAINT

CONSOLIDATED GAS COMPANY OF NEW YORK

(Gas Sales, Year 1922, 20,580,285,600 Cu. ft.)

ANNUAL REVENUE AND "FLAT" RATE REQUIRED IN ORDER TO PAY OPERATING EXPENSES AND PROVIDE AN ADEQUATE RETURN ON INVESTMENT

TABLE No. 1

Based (1) upon the net cost of gas sold during the year ended December 31, 1922, after excluding therefrom all interest actually paid on investment in property of other companies.

(2) Upon the investment in the property of the Consolidated Gas Company, as found by the Commission, as of June 30, 1922, plus net additions to December 31, 1922, together with the property of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company.

	With return on investment computed at 8% per annum			With return on investment computed at 7% per annum		
		—Amount—	per M cu. ft. sold		—Amount—	Per M cu. ft. sold
Net cost for the year 1922 exclusive of any interest on properties of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company		$18,825,036.50	$.9147		$18,825,036.50	$.9147
Interest on investment of Consolidated Gas Company employed in the gas business, as found by the Commission, as of June 30, 1922, plus net additions at actual cost to December 31, 1922, $67,997,206.38 and on $29,105,349.60 of investment of other gas companies in plant and equipment and facilities used in the manufacture and distribution of gas sold by the Consolidated Gas Company, or a total of $97,102,555.98		7,768,204.48	.3537		6,797,178.92	.3095
Add for Federal income tax at 12½% on the excess of interest on total investment over the amount of interest on investment of other gas companies employed in the manufacture and distribution of gas sold by Consolidated Gas Company	$777,110.93			$679,972.06		
Less, amount accrued during the year to provide for Federal income tax included in the above item of net cost	350,000.00	427,110.93	.0194	350,000.00	329,972.06	.0150
Total revenue and "flat" rate required		$27,020,351.91	$1.2878		$25,952,187.48	$1.2392

TABLE No. 2

Based (1) upon the net cost of gas sold during the year ended December 31, 1922, after excluding therefrom all interest actually paid on investment in property of other companies.

(2) Upon the investment in the property of the Consolidated Gas Company, as found by the Commission, as of June 30, 1922, plus net additions to December 31,1922, together with the property of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company, and inclusive of the deficiency in earnings below an 8% return upon the minimum investment (compounded annually) during the period from January 1, 1917, to December 31, 1921.

	With return on investment computed at 8% per annum			With return on investment computed at 7% per annum		
		—Amount—	per M cu. ft. sold		—Amount—	Per M cu. ft. sold
Net cost for the year 1922 exclusive of any interest on properties of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company		$18,825,036.50	$.9147		$18,825,036.50	$.9147
Interest on investment of Consolidated Gas Company employed in the gas business, as found by the Commission, as of June 30, 1922, plus net additions at actual cost to December 31, 1922, $67,997,206.38 and $29, 105, 349.60 of investment of other gas companies in plant and equipment and facilities used in the manufacture and distribution of gas sold by Consolidated Gas Company and on $31,876,716.59 of deficiency in earnings below an 8% return on minimum investment (compounded annually) for the five years ended December 31, 1921, or a total of $128,979,272.57		10,318,541.81	.4698		9,028,549.08	.4111
Add, for Federal income tax at 12½% on the excess of interest on total investment (including deficiency) over amount of interest on investment of other gas companies employed in the manufacture and distribution of gas sold by Consolidated Gas Company	1,141,416.26			998,739.23		
Less, amount accrued during the year to provide for Federal income tax included in the above item of net cost	350,000.00	791,416.26	.0360	350,000.00	648,739.23	.0295
Total revenue and "flat" rate required		$29,934,994.57	$1.4205		$28,502,324.81	$1.3553

(Exhibit "D" continued on following page)

Exhibit D—Continued

CONSOLIDATED GAS COMPANY OF NEW YORK

(Gas Sales Year 1922, 20,580,285,600 Cu. Ft.)

ANNUAL REVENUE AND "FLAT" RATE REQUIRED IN ORDER TO PAY OPERATING EXPENSES AND PROVIDE AN ADEQUATE RETURN ON INVESTMENT

TABLE No. 3

Based (1) upon the net cost of gas sold during the year ended December 31, 1922, after excluding therefrom all interest actually paid on investment in property of other companies.

(2) Upon the present value of the property of the Consolidated Gas Company employed in the gas business, together with the present value of the property of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company.

	With return on investment computed at 8% per annum			With return on investment computed at 7% per annum		
	——Amount——		per M cu. ft. sold	——Amount——		Per M cu. ft. sold
Net cost for the year 1922 exclusive of any interest on properties of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company		$18,825,036.50	$.9147		$18,825,036.50	$.9147
Interest on the present value of the investment of the Consolidated Gas Company employed in the gas business $143,608,155.00 and on $42,862,866.75 (the present value) of the investment of other gas companies used in the manufacture and distribution of gas sold by Consolidated Gas Company or a total present value of $186,471,021.75		14,917,681.74	6792		13,052,971.52	.5943
Add, for Federal income tax at 12½% on the excess of interest on the present value of the total investment over the amount of interest on the present value of the investment of other gas companies employed in the manufacture and distribution of gas sold by the Consolidated Gas Company	1,641,236.06			1,436,081.55		
Less, amount accrued during the year to provide for Federal income tax included in the above item of net cost	350,000.00	1,291,236.06	.0588	350,000.00	1,086,081.55	.0494
Total revenue and "flat" rate required		$35,033,954.30	$1.6527		$32,964,089.57	$1.5584

TABLE No. 4

Based (1) upon the net cost of gas sold during the year ended December 31, 1922, after excluding therefrom all interest actually paid on investment in property of other companies.

(2) Upon the present value of the property of the Consolidated Gas Company employed in the gas business, together with the present value of the property of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company, and inclusive of the deficiency in earnings below an 8% return upon the minimum investment (compounded annually) during the period from January 1, 1917, to December 31, 1921.

	With return on investment computed at 8% per annum			With return on investment computed at 7% per annum		
	——Amount——		per M cu. ft. sold	——Amount——		Per M cu. ft. sold
Net cost for the year 1922 exclusive of any interest on properties of other gas companies used in the manufacture and distribution of gas sold by Consolidated Gas Company		$18,825,036.50	$.9147		$18,825,036.50	$.9147
Interest on the present value of the investment of the Consolidated Gas Company employed in gas business, $143,608,155.00, and on $42,862,866.75 (the present value) of the investment of other gas companies used in the manufacture and distribution of gas sold by the Consolidated Gas Company, and on $31,876,716.59 of deficiency in earnings below an 8% return on minimum investment (compounded annually) for the five years ended December 31, 1921, or a total of $218,347,738.34		17,467,819.07	.7953		15,284,341.68	.6959
Add, for Federal income tax at 12½% on the excess of interest on the present value of the total investment (including deficiency) over the amount of interest on the present value of the investment of other gas companies employed in the manufacture and distribution of gas sold by Consolidated Gas Company	2,005,541.39			1,754,848.72		
Less, amount accrued during the year to provide for Federal Income Tax included in the above item of net cost	350,000.00	1,655,541.39	.0754	350,000.00	1,404,848.72	.0640
Total revenue and "flat" rate required		$37,948,396.96	$1.7854		$35,514,226.90	$1.6746

134 of the Laws of 1921, as alleged in the paragraphs of the bill of complaint marked and numbered "VII," "VIII," "IX," "X," "XLV," "XLVI" and "XLVII," but the defendant denies that he has any knowledge or information sufficient to form a belief as to each and every other allegation contained in the said paragraphs so marked and numbered, and prays that this Court refer to the official statutes of each of the said several years for the purpose of insuring greater definiteness and certainty.

Fourth. That the defendant further answering the bill of complaint herein, admits that a proceeding was instituted by the plaintiff in the United States District Court for the Southern District of New York as alleged in the paragraph marked and numbered "XII" of the complaint and the reference of the said case to the Hon. Abraham S. Gilbert as Special Master to take all the testimony and evidence with respect to the issues therein, fully find the facts and report to the Court all the testimony and evidence received by him together with his findings of fact and recommendations as alleged in the paragraph marked and numbered "XIII." That further, defendant admits that the Special Master aforesaid, made his report in the premises [fol. 79] but the said defendant denies that he has any knowledge or information sufficient to form a belief as to each and every of the remaining allegations contained in said last named paragraph.

Fifth. That the defendant further answering the bill of complaint herein, and in addition to the denials already interposed to the allegations of the paragraphs marked and numbered "XVI," "XVII" and "XVIII," admits that the Public Service Commission of the State of New York instituted a proceeding for the purpose of investigating the rates charged by various gas companies in the City of New York and that the said Commission issued an order fixing rates for gas sold in said City but defendant denies that he has any knowledge or information sufficient to form a belief as to each and every remaining allegation thereof except that he alleges affirmatively, upon information and belief, that the rates thus fixed were more than necessary to compensate the said plaintiff for its public service as well as to provide for all of its reasonable operating ex-

penses, its taxes and a fair return on the fair value of the investment used by the plaintiff in such service.

Sixth. That the defendant further answering the bill of complaint herein and in addition to the denials already interposed in the paragraphs thereof marked and numbered "XXI" and "XXII," admits that on or about the 20th day of May, 1921, the Public Service Commission of the State of New York instituted a proceeding before it relative to the standards of purity, lighting power and heating power of gas and the standards of measurement thereof in the City of New York; that, further, the said Commission issued an order in the premises fixing a calorific standard [fol. 80] for said City of 587 British Thermal Units per cubic foot and a daily average of not less than 525 British Thermal Units per cubic foot, but the defendant alleges affirmatively that said fixation was a reduction in quality of gas furnished in the City of New York from 22 candle power, a standard which had theretofore prevailed in said City for approximately 20 years and having an average quality of 650 British Thermal Units per cubic foot. That the said defendant is informed and verily believes that such reduction in quality had the effect of increasing the cost of gas to the consumer so that the rates concurrently fixed by the said Commission were excessive, unreasonable and more than necessary to compensate the said plaintiff for its public service.

Seventh. That the defendant further answering the bill of complaint herein, and in addition to the denial already interposed to that part thereof marked and numbered "XXXIX," alleges upon information and belief, that the rate of $1.00 per thousand cubic feet fixed by Chapter 899 of the Laws of 1923 is a fair and reasonable rate to this plaintiff and is abundantly sufficient to compensate the said plaintiff for the public service it renders, as well as to pay all reasonable operating expenses and taxes, and to pay further a fair and reasonable return to the plaintiff upon a fair and reasonable valuation of its investment engaged in the public service. Further, the defendant alleges affirmatively, upon information and belief, that the plaintiff does not operate its business in a careful, and efficient manner, and does not practice reasonable economies in the

purchase of its coal, gas-oil and other materials used in the manufacture of gas, and that cheaper, equally efficient and more available forms of fuel may be obtained [fol. 81] by the said plaintiff at a substantial reduction in the present cost of manufacture of its product. That, further, the defendant is informed and verily believes that the said plaintiff does not keep its books of account in compliance with an order issued by the Public Service Commission requiring the said plaintiff to keep such books in accordance with a system known as the Uniform System of Accounts, and that by reason thereof and the inadequacy of the force of employees of the said Commission to properly correct and supervise said books of account, neither the said Commission nor the public can readily ascertain the cost to the said plaintiff of the manufacture and distribution of its product.

Eighth. That the defendant further answering the bill of complaint herein and in addition to the denial already interposed to the allegations of the paragraph thereof marked and numbered "XL," alleges affirmatively, upon information and belief that the standard of quality fixed by Chapter 899 of the Laws of 1923 is so far as the heat content thereof is concerned about the same on the average as that furnished by the plaintiff heretofore during the existence of the 22 candle power standard; that the said standard of quality of 650 British Thermal Units per cubic foot is a valid regulation of the Legislature of the State of New York, is within its exclusive prerogative, and is not the subject of any adverse determination by the judicial power of the Federal Government.

Ninth. That the defendant further answering the bill of complaint herein, alleges affirmatively that said plaintiff has made no experimentation with the rate or standard of [fol. 82] quality of gas of 650 British Thermal Units per cubic foot fixed by the Legislature of the State of New York in said Chapter 899 of the Laws of 1923 of said State, and has no knowledge or information upon which to base its conclusion as set forth in the bill of complaint as to the cost to it of the manufacture and distribution of gas having a standard of quality of 650 British Thermal Units based on a rate of $1.00 per thousand cubic feet.

Wherefore defendant prays that the said bill of complaint herein be dismissed with costs.

Carl Sherman, Attorney General of the State of New York. James A. Donnelly, Solicitor for the Attorney General.

Office and Post Office address: 51 Chambers Street, Borough of Manhattan, City of New York.

[fol. 83] In United States District Court

[Title omitted]

Answer of Defendants William A. Prendergast et al., Constituting the Public Service Commission

The above named defendants, William A. Prendergast, William R. Pooley, Charles Van Voorhis, Oliver C. Semple and James A. Parsons, constituting the Public Service Commission of the State of New York, by Ledyard P. Hale, their Solicitor, answer the Bill of Complaint herein as follows:

I

These defendants, answering Paragraphs I, II and III of plaintiff's complaint, admit that plaintiff is a corporation engaged in the business of manufacturing and selling gas in the [fol. 84] Borough of Manhattan, City of New York; that it was organized under and by virtue of Chapter 367 of the Laws of 1884. These defendants are without knowledge as to the allegations contained in plaintiff's complaint setting forth plaintiff's ownership and right to the use, possession and enjoyment of certain perpetual franchises and rights to use streets, alleys and public places in the said City of New York for the purpose of laying street mains therein and supplying gas through said mains to the inhabitants of said City of New York; and are without knowledge as to the rights of plaintiff to the use, possession and enjoyment of any part or all of certain real property owned by any or all of the six constituent companies alleged to have been consolidated in plaintiff company, or of the plaintiff company's ownership or right to use, possess or enjoy any fran-

chises, rights or grants used, possessed or enjoyed by any or all of said six constituent companies, or of the plaintiff company's ownership or right to use, possess and enjoy personal property owned by any or all said constituent companies; these defendants are without knowledge as to plaintiff company's ownership, right of use, possession, or enjoyment of any additional franchises, grants or rights alleged to have been from time to time acquired by it, and, therefore, deny each and every such said allegation or allegations.

II

These defendants, answering Paragraphs IV, V, VI, VII, VIII, IX, X, XI, XII, XIII, XIV, XV, XVI and XVII of plaintiff's complaint, admit the allegations therein contained, except that defendants are without knowledge as to the amount of revenue per thousand cubic feet of gas sold, which plaintiff now receives under the rates prescribed and fixed by said order of said Public Service Commission of [fol. 85] August 30, 1922, referred to in plaintiff's complaint, and therefore deny the allegations respecting said revenue per thousand cubic feet of gas sold, as set forth in said Paragraph XVII.

III

These defendants, answering Paragraphs XVIII, XIX, XX, XXI, XXII and XXIII of plaintiff's complaint, admit the allegations therein contained, except these defendants allege that said orders of said Public Service Commission of August 30, 1922, prescribing classifications and rates to be charged for gas as in plaintiffs complaint set forth, were based upon facts found by the Commission in its said investigations and hearings, and that the Commission found on the date each said order was made that said rates so fixed were just and reasonable rates to be charged by the plaintiff to its consumers in the City of New York, and in the said opinion filed by the Commission contemporaneously with the making and entering of said orders, it was stated and determined by the Commission that said rates and classifications of service so fixed should be established to be effective for one year from the first day of October, 1922, and to continue in force until the 30th day of September,

1923, and thereafter until the Commission should otherwise order.

IV

These defendants admit the enactment of Chapter 899 of the Laws of 1923 as alleged in Paragraphs XXIV and XXV of plaintiff's complaint; and allege that on or about the 4th day of June, 1923, said Public Service Commission of the State of New York duly served on the plaintiff an order as follows:

[fol. 86] "State of New York Public Service Commission

At a session of the Public Service Commission held in the city of Albany on the 4th day of June, 1923.

Present: William A. Prendergast, Chairman; Charles Van Voorhis, Oliver C. Semple, James A. Parsons, Commissioners.

Case No. 1360

In the Matter of Rates to be Charged for Gas in the City of New York

The Commission having under consideration the provisions of Chapter 899 of the Laws of 1923 in relation to charges for gas in cities of over one million inhabitants:

Ordered: That each and every gas corporation engaged in the business of manufacturing, furnishing or selling illuminating gas in the City of New York be and hereby is required forthwith to comply with such statute, and be and hereby is authorized to file and publish a new schedule of its rates for gas effective forthwith in accordance with said statute.

Further Ordered: That the Secretary serve by mail forthwith a copy of this order on every such gas corporation.

By the Commission.
(Signed) Harry M. Ingram, Acting Secretary.
(Seal.)"

[fol. 87] These defendants, answering Paragraphs XXVII, XXVIII and XXIX of plaintiff's complaint, deny upon information and belief the allegations therein con-

tained, and further deny that the plaintiff is possessed of going value and other intangible assets of great value or of any value, or that the plaintiff is entitled to add or include the sum of $31,876,716.59, or any other sum representing deficiencies or aggregate deficiency to or in the fair and reasonable value of its property used and useful in the public service and upon which it is entitled to a return. These defendants, further answering said Paragraphs XXVII, XXVIII and XXIX of plaintiff's complaint deny that its investment in property devoted to its gas business as of December 31, 1922, and on which it is entitled to a return is $67,997,206.38, or any amount in excess of $50,780,933; and deny that the present value of plaintiff's said property as of December 31, 1922, exclusive of going value based upon current prices of materials and labor entering therein, or otherwise, is $143,608,155, or any amount in excess of $50,780,933.

VI

These defendants, answering Paragraphs XXX, XXXI, XXXII, XXXIII, XXXIV, XXXV, XXXVI and XXXVII of plaintiff's complaint, deny upon information and belief, each and every allegation therein contained and allege that the gross operating revenues and operating expenses of plaintiff in the year ended December 31, 1922, or for the period from January 1, 1917, to December 31, 1921, or its net income for said year ended December 31, 1922, or for the period from January 1, 1917, to December 31, 1921, in no way indicate or measure the return hereafter to be [fol. 88] earned by said plaintiff under said Chapter 839 of the Laws of 1923 of the State of New York.

VII

These defendants, answering paragraphs XXXVIII, XXXIX, XL, XLI, XLII, XLIII and XLIV, deny, upon information and belief, each and every allegation therein contained, except that in pursuance of and in compliance with the requirements of the said order of said Public Service Commission of August 30, 1922, hereinbefore referred to, plaintiff proceeded to effect changes in its manufacturing plant and distributing system and in its

method of manufacture and distribution of gas to its consumers and made changes in the adjustment of various gas appliances used by the plaintiff's consumers in order to comply with the terms and conditions of said order and to adapt said consumers' gas appliances to the safe and efficient use of gas of the standard prescribed by the said order of said Commission.

VIII

These defendants, answering Paragraphs XLV, XLVI and XLVII of plaintiff's complaint, admit the allegations therein contained.

IX

These defendants, answering Paragraphs XLVIII and XLIX of plaintiff's complaint, deny, upon information and belief, all of the allegations therein contained.

X

These defendants, answering the allegations of Paragraph L[1] of plaintiff's complaint, deny that plaintiff can [fol. 89] only obtain relief in a court of equity and deny that the interposition of the power of the court of equity is necessary in any manner or at all to protect the alleged rights of plaintiff or plaintiff's property herein against any action which can be taken by these defendants under and pursuant to the statutes of the State of New York.

Wherefore, these defendants pray that the bill of complaint herein be dismissed with costs; and said defendants pray for such other relief in the premises as to this Honorable Court may seem meet and in accordance with equity.

Ledyard P. Hale, Solicitor for Defendants, 91 State Street, Albany, N. Y. Charles G. Blakeslee, Edward M. Deegan, Sherman C. Ward, of Counsel.

[fol. 90] IN UNITED STATES DISTRICT COURT

[Title omitted]

ORDER APPOINTING SPECIAL MASTER—July 24, 1923

Issue having been joined in this case by the filing of the answers of the above-named defendants, and the plaintiff having moved, upon the affidavit of William L. Ransom, Esq., verified July 16, 1923, for the appointment of a Special Master herein.

Now, on motion of Messrs. Shearman & Sterling, solicitors for the plaintiff, it is

[fol. 91] Ordered

I. That James G. Graham be, and he is hereby appointed Special Master to take the testimony and evidence upon the issues herein, make all needed computations and fully hear the facts, and to report to the Court his findings of fact and conclusions of law, together with the evidence, for the advisement of the Court; provided that nothing herein contained shall be construed as meaning that the Special Master's findings of fact shall be final, but only that he shall find the facts for the purpose of aiding the Court and making his recommendations. The said Master shall, before submitting to this Court his final report, prepare and serve on the solicitors for the respective parties hereto a draft of such report.

II. The said Master shall hold a session on July 30, 1923, at 10.30 o'clock in the forenoon, at a place to be determined by him, for the purpose of fixing at that time, the date when he will proceed to the hearing of the testimony and evidence in this cause, said date, however, to be not later than September 28, 1923. After the Master shall have entered upon said hearing he shall proceed as speedily as [fol. 92] practicable. He may hold one or two sessions in each day, in his discretion, until the completion of the taking of the testimony and evidence in this cause. The order or sequence in which the several pending cases shall be brought on for trial before the Special Master shall be determined by the plaintiffs' counsel.

III. Any party to this cause may offer in evidence any findings heretofore made, in this Court, or in the Supreme

Court of the State of New York, with respect to any matter at issue in this action. Any party to this action may read in evidence upon the trial before the Special Master any testimony given by any witness in any prior litigation with respect to the rates chargeable by the plaintiff for gas, and may offer in evidence, upon the trial of this action, subject to objections by any other party hereto, any exhibits received upon the trial of such previous litigation and deemed by the Special Master to be pertinent to the issues in this action; provided, however, that if such witness be living and available he shall, upon the request of any other party or of the Special Master, be produced, for the purpose of further cross-examination, by the party so reading his prior testimony in evidence.

[fol. 93] IV. The said Master shall report to this Court all the testimony and evidence received by him, together with his findings of fact and his recommendations as to the facts and the law.

Francis A. Winslow, U. S. D. J.

[fol. 94] Sirs: Please take notice that the within is a copy of an order appointing a Special Master herein, duly made, entered and filed in the office of the Clerk of the United States District Court for the Southern District of New York on the 25th day of July, 1923.

Dated New York, July 26, 1923.

Yours, etc., Shearman & Sterling, Solicitors for Plaintiff.

Office and Post Office address 55 Wall Street, Borough of Manhattan, City of New York.

To Honorable Ledyard P. Hale, Solicitor for defendant Public Service Commission, 30 Church Street, New York, N. Y.; Honorable James P. Donnelly, Solicitor for Defendant Attorney General, 51 Chambers Street, New York, N. Y. Honorable James G. Graham, 80 Maiden Lane, New York, N. Y.

Copy received July 26, '23. James A. Donnelly, Solicitor for Defendants. Carl Sherman, Attorney General.

[fol. 95] IN UNITED STATES DISTRICT COURT

[Title omitted]

ORDER RESETTLING FORM OF ORDER APPOINTING SPECIAL MASTER—August 7, 1923

This cause came on to be further heard at this Term, and was argued by counsel; and thereupon, upon consideration thereof, it is

Ordered, as follows:

I. That the motion of the defendant Carl Sherman as Attorney-General of the State of New York, in pursuance of a notice of motion dated July 31, 1923, for a resettlement of the order appointing a Special Master herein, made and entered herein on the 24th day of July, 1923, by striking out the provision of Paragraph "II" thereof, that "the [fol. 96] order or sequence in which the several pending cases shall be brought on for trial before the Special Master shall be determined by the plaintiff's counsel," and by substituting in the place and stead thereof a provision requiring the eight pending cases to be tried in the order or sequence specified in the said notice of motion, be, and the same hereby is denied.

II. That the motion of the defendant Carl Sherman to resettle the said order of reference by striking out the provisions contained in paragraph "III" thereof, be, and the same is hereby is, granted.

III. That the order heretofore made and entered herein, dated July 24th, 1923, be, and the same hereby is, resettled and amended so as to read as follows:

"At a stated term of the District Court of the United States for the Southern District of New York, held in the Post Office Building, in the Borough of Manhattan, in the city, county and State of New York, on the 24th day of July, 1923.

"Present: Honorable Francis A. Winslow, United States District Judge.

In Equity. No. 26-366

CONSOLIDATED GAS COMPANY OF NEW YORK, Plaintiff,

against

WILLIAM A. PRENDERGAST, WILLIAM R. POOLEY, CHARLES Van Voorhis, Oliver C. Semple, and James A. Parsons, Constituting the Public Service Commission of the State of New York, and Carl Sherman, as Attorney-General of the State of New York, Defendants.

Order Appointing Special Master

[fol. 97] "Issue having been joined in this case by the filing of the answers of the above-named defendants, and the plaintiff having moved, upon the affidavit of William L. Ransom, Esq., verified July 16, 1923, for the appointment of a Special Master herein,

"Now, on motion of Messrs. Shearman & Sterling, solicitors for the plaintiff, it is

"Ordered

"I. That James G. Graham be, and he is hereby appointed Special Master to take the testimony and evidence upon the issue herein, make all needed computations and fully hear the facts, and to report to the Court his findings of fact and conclusions of law, together with the evidence, for the advisement of the Court; provided that nothing herein contained shall be construed as meaning that the Special Master's findings of fact shall be final, but only that he shall find the facts for the purpose of aiding the Court and making his recommendations. The said Master shall, before submitting to this Court his final report, prepare and serve on the solicitors for the respective parties hereto a draft of such report.

"II. The said Master shall hold a session on July 30, 1923, at 10.30 o'clock in the forenoon, at a place to be determined by him, for the purpose of fixing at that time, the date when he will proceed to the hearing of the testimony and evidence in this cause, said date, however, to be not later than September 28, 1923. After the Master shall have entered upon said hearing he shall proceed as speedily as practicable. He may hold one or two sessions in each day, [fols. 98 & 98a] in his discretion, until the completion of the

taking of the testimony and evidence in this cause. The order or sequence in which the several pending cases shall be brought on for trial before the Special Master, shall be as follows:

(1) The New York and Queens Gas Company v. Prendergast et al.

(2) Bronx Gas and Electric Company v. Prendergast et al.

(3) Consolidated Gas Company of New York v. Prendergast, et al.

(4) The Sandard Gas Light Company of the City of New York v. Prendergast et al.

(5) Central Union Gas Company v. Prendergast et al.

(6) Northern Union Gas Company v. Prendergast et al.

(7) New Amsterdam Gas Company v. Prendergast et al.

(8) The East River Gas Company of Long Island City v. Prendergast et al.

"If, before the completion of the hearing of the New York and Queens Gas Company case before the Special Master, plaintiff's counsel are then prepared to proceed with the presentation of testimony in the Consolidated Gas Company case and the other cases numbered (4) to (8) above, both inclusive, the plaintiff's counsel may, if the defendants' counsel consent and the Special Master approve, bring the Consolidated Gas Company case, singly or in conjunction with Cases Nos. (4) to (8), as may be agreed on, for the taking of testimony therein at the close of the taking of testimony in the New York and Queens Gas Company case, reserving the Bronx Gas and Electric Company case for the taking of testimony therein at such subsequent date as may be fixed by the Special Master.

"III. The said Master shall report to this Court all the testimony and evidence received by him, together with his findings of fact and his recommendations as to the facts and the law.

Francis A. Winslow, U. S. D. J."

Francis A. Winslow, U. S. D. J.

[fol. 99] IN UNITED STATES DISTRICT COURT

[Title omitted]

OPINION OF THE SPECIAL MASTER—January 15, 1925

This is a suit in equity brought by the plaintiff Consolidated Gas Company of New York, against the defendants, who constitute the Public Service Commission of the State of New York and the Attorney-General of the State of New York, to determine the constitutionality of Chapter 899 of the Laws of 1923, in relation to the price and quality of gas, and for permanent injunction restraining the enforcement of the statute.

[fol. 100] By Section 72 of the Public Service Commission Law (Chapter 488 of the Laws of 1910), as amended by Chapter 134 of the Laws of 1921, the Legislature empowered the Commission to fix rates to be charged by a gas corporation and also to establish a period not exceeding three years during which the rate so fixed should continue in effect, and thereafter until the Commission should fix a different rate. And by subdivision 3 of section 66 of the same law, the Commission was also authorized to fix a standard of quality of gas to be furnished by the companies to their consumers.

Appearances:

For the plaintiff Shearman & Sterling, solicitors, by William L. Ransom, Jacob H. Goetz, Sanford H. E. Fraund, and George G. Bogert, of Counsel.

For the defendants William A. Prendergast, William C. Semple, and James A. Parsons, constituting the Public Service Commission of the State of New York: Charles G. Blakeslee solicitor, by Harry Myron Chamberlain and Charles E. Murphy, of counsel.

For the defendant Carl Sherman, as Attorney-General of the State of New York: James A. Donnelly, solicitor, by James A. Donnelly and Harry Hertzoff of counsel.

[fol. 101] The action was referred to me as Special Master by an order of Hon. Francis A. Winslow, United States District Judge for the Southern District of New York, dated the 24th day of July, 1923, as amended by an

order made on the 7th day of August 1923, directing me to hear the evidence, make the computations, find the facts and report the facts with my recommendations.

The order appointing me fixed the 30th day of July, 1923, as the day on which hearings should commence, and provided that they should continue daily as nearly as possible until the completion thereof.

Subsequently, by agreement of all parties and the consent of the District Judge, the parties were allowed until March 3, 1924, to complete their preparations for trial.

From that day until August 1st, 1924, I held sessions practically five days a week except holidays and Saturdays, sitting morning and afternoon, and averaging five hours a day. There has been taken 10,515 typewritten pages of testimony and 1,037 exhibits have been introduced by the plaintiff and 115 exhibits have been introduced by the defendants. The minutes of the testimony have now been printed, and I shall file with my report a printed copy of the transcript.

In accordance with the requirements of the order of August 7, 1923, and the accustomed practice in the trial of rate suits in equity in this district, I submitted to the counsel for all parties on December 12, 1924, a preliminary draft of my report and of this opinion as well.

On December 29, 1924, I received from the counsel preliminary written and verbal statements embodying their [fol. 102] suggestions and criticisms regarding the matters covered by said preliminary drafts. Whereupon I have proceeded to complete and file my report and opinion in its final form, which alone is to be taken as completely embodying my findings and conclusions.

For the purpose of placing before the Court as concisely as possible the contentions in reference to the legal questions involved and the facts relative thereto, I have hereinafter set them forth.

Difference Between Present and Former Suit

At the outset it seems proper to call the Court's attention to certain material differences both as to matters of law and as to questions of fact, between the issues presented in this suit and those which arose and were determined in

the prior litigation (Newton v. Consolidated Gas Company, 267 Fed. 231; 258 U. S. 165). In that suit, the plaintiff company sought a decree declaring unconstitutional, because confiscatory of its property, Chapter, 125 of the Laws of 1906 (generally known as the Eighty-cent Gas Law). The basis of its claim was that the maximum selling price of 80 cents per thousand cubic feet of gas allowed by that statute did not net the plaintiff a fair return upon the reasonable value of its property necessarily used in the manufacture and distribution of gas to its consumers in the Borough of Manhattan, City of New York. This was the sole legal question involved. The Master and the District Court took the investment of the plaintiff as the rate base. It was found that the Astoria plant was essentially a manufacutring department of the plaintiff, and to test the cost of making gas the Court took house A [fol. 103] and house D of that plant (being the houses at which coal and water gas were respectively manufactured at the lowest reported cost). This was conceding to the defendants the utmost of their contentions as to the basis of the cost of operation on which the statute should be tested. The District Judge in approving the Master's report stated that "for the purposes of that suit he had resolved all questions of fact against the plaintiff to see if by any possiblity the statutory rate could be a fair rate."

The decree adjudging the rate confiscatory was sustained by the Supreme Court of the United States. While in that case some evidence was introduced as to the cost of reproduction of the plaintiff's property, it was not strongly pressed as the "rate base" for the purposes of that suit, for the reason that on the minimum cost of operation thus taken by the District Judge it appeared that the return was insufficient to net the company a fair return on its investment in any event, and that the operating costs had in fact come to exceed the rate.

In the present suit not alone is the statutory rate alleged to be confiscatory on the general grounds set forth in the previous suit, but the statute is attacked on various other grounds. The provision requiring the plaintiff to furnish gas of a standard of not less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, to all its consumers, is

claimed to be in violation of the Fourteenth Amendment of the Constitution of the United States, on various grounds set forth in the complaint. It is also claimed that the passage of the statute was in violation of Section 10 of Article 1 of the Constitution of the United States in that it impairs [fol. 104] the obligation of the plaintiff's contract with the State of New York, and it is also claimed that various other provisions of the statute are arbitrary, oppressive, unreasonable and unduly discriminatory and in violation of various provisions of the Constitution of the United States.

In this suit, the plaintiff undertook for the first time to give full and complete proof of what it asserted was the present reproduction cost and present value of all of the property used by it in its gas business. It presented what it claimed was a complete inventory and appraisal of such property and supported it by the testimony of various witnesses. [It also presented what it claimed to be its investment therein up to December 31, 1923, according to its books and according to the findings of the Court in the prior suit plus net additions.] The plaintiff also presented proof of its stock capitalization, its outstanding indebtedness, the amount claimed to be properly allowable for working capital, the amount of the undistributed structural costs at their original cost figures per books and at their present replacement cost per engineering estimates, and a comprehensive study and evidence which it claimed established a basis for an allowance for "going value." Evidence was presented of the cost of making gas by each separate plant of the company, and of the Astoria Company, and of the cost to the company as a whole, and of the cost of making gas by the Consolidated transfer-of-gas system companies.

The defendants presented no proof on the subject of the reproduction costs of the property, except as to the Astoria tunnel. As to that property, the defendants offered proof [fol. 105] that the plaintiff's reproduction cost estimates were too high. The defendants contended that investment cost was the proper basis. They presented no evidence as to the cost of operation of the plaintiff at all of its plants, or of the transfer of gas system as a whole; but the defendant Attorney-General offered in evidence an estimate of what he claimed should be the proper cost of making

gas by the Astoria Company for the twelve months to end April 1, 1925, and more particularly by the two units of the Astoria company heretofore mentioned, which the defendants asserted should be the basis for testing the statute, and a comparison of the cost of making gas at these selected plants with that of the cost reported at the other plants of the company. They presented no evidence on the subject of the cost of distribution of the gas to the company's consumers, as to the cost of making the purchased gas, or as to the basis on which payments were made for the same. Aside from the evidence presented by the Attorney-General's engineer experts as to what he estimated gas might be made for in the future at the Astoria plant and at these selected units, the only testimony presented in contradiction of that introduced by the plaintiff was as to the proper allowance to be made for working capital, as to the reproduction cost of the Astoria tunnel, and as to the present value of the land owned and used by the plaintiff.

The defendants did of course put the plaintiff generally to its proofs, and in their briefs they set forth various reasons why the purely legal objections urged for condemning the statute should not prevail. They also attacked plaintiff's evidence by cross-examination of considerable duration.

It will be seen from this short review that the questions [fol. 106] presented to the Master for determination differed in many respects from, and were much more varied and extended than, those brought up on the prior hearing. In view of the difference in the facts and in the rate, and these additional legal grounds raised, the determination in the prior case has little bearing on the new issues in the present litigation.

Basis of the Action

The plaintiff is a corporation organized under the laws of the State of New York, engaged in supplying gas to inhabitants of the Borough of Manhattan, City of New York. The defendants are public officials charged with duties in respect to the enforcement of the statute hereinafter mentioned.

By Chapter 899 of the Laws of 1923, entitled "An Act

to amend the Public Service Commission law in relation to charges for illuminating gas in cities containing a population of one million or over," Chapter 480 of the Laws of 1910 was amended by inserting therein a new section reading as follows:

"67a. Charge for Gas in Cities of One Million or More.—A gas corporation engaged in the business of manufacturing, furnishing or selling illuminating gas in a city containing a population of one million or over shall not charge or receive for gas furnished or sold in such city a sum per one thousand cubic feet in excess of one dollar, nor furnish in such city gas of a standard less than six hundred and fifty British thermal units per cubic foot, measured under [fol. 107] normal conditions of temperature and atmospheric pressure. The public service commission notwithstanding any other provision of this chapter, shall not allow a rate or charge in the case of such cities in excess of such sum."

This Act further provided that it should take effect immediately; and it became effective by the signature of the Governor of the State of New York on June 2, 1923.

Chapter 899 of the Laws of 1923 thus undertakes to fix one dollar as a maximum price which gas corporations in any cities having a population of a million or over may charge for gas sold to consumers other than the municipality—the price to the City of New York as a consumer being regulated by another statute—and undertakes to prescribe, as the standard of quality of the gas to be furnished at such price in such cities, a calorific content not falling below 650 British thermal units per cubic foot.

Plaintiff is one of the corporations designated in said Section 67a, and the City of New York is the only city in the State of New York having a population of over one million inhabitants.

By an order made by the Public Service Commission of the State of New York, on August 30, 1922, effective October 1, 1922, the said Commission, as then authorized by statute to do, fixed rates to be charged by plaintiff to its consumers (other than the City of New York) ranging from $1.15 per thousand cubic feet for the first 500,000 cubic feet of gas per meter per month to 95 cents per thousand cubic feet for over one million cubic feet per meter per month.

Practically all the gas sold by the plaintiff comes within the first class.

[fol. 108] By an order entered in its Case No. 108 on August 30, 1922, closely correlated with its rate order as to the plaintiff on the same day, the Commission had authorized all gas companies in New York City to furnish to their consumers gas which would "have a total heating value on a monthly average (made up of the daily averages) of not less than 537 British thermal units per cubic foot, and a daily average (made up of the daily averages) of not less than 525 British thermal units per cubic foot on any three consecutive calendar days in any month." The order further provided that the heating value of the gas furnished by a gas corporation should not, on any three consecutive calendar days, have a maximum variation upward of more than five per cent of such monthly average heating value as the company did maintain and furnish, under the above quoted provision.

The requirement for the furnishing of the quality of gas conforming to the British thermal unit standard was to become effective on and after October 1, 1922; that is, a month after the order was entered, so that the gas corporations affected by the order, including the plaintiff, were allowed time to make the necessary preparation for changing the standard.

The Special Statutory Court held unanimously that the plaintiff made out a case for an injunction restraining the taking effect of the Act in question, and, pending the final determination of the Court, authorized the plaintiff to charge a rate of $1.15 per thousand cubic feet of gas sold except to the City of New York, such rate pendente lite being that prescribed by the Public Service Commission by its order in Case No. 79, and its continuance under the [fol. 109] temporary injunction was authorized on the basis that, during the pendency of the action, the plaintiff would continue to furnish gas of the quality then being supplied under the Commission's order in Case No. 108.

Organization of the Plaintiff

The plaintiff Consolidated Gas Company of New York controls, directly or indirectly through stock ownership, the

corporations known as The Astoria Light, Heat and Power Company, The Standard Gas Light Company of the City of New York, the Central Union Gas Company, the Northern Union Gas Company, the New Amsterdam Gas Company, The East River Gas Company of Long Island City, the New York and Queens Gas Company and The Bronx Gas and Electric Company, each of which corporations is engaged in the business of manufacturing or furnishing, or both, gas in parts of the Boroughs of Manhattan, The Bronx or Queens, in the City of New York. These companies have been commonly referred to in the hearings before me, as the "affiliated gas companies." Aside from the New York and Queens Gas Company and The Bronx Gas and Electric Companies, the mains of the above-named companies are to an extent inter-connected, as hereinafter described.

The Consolidated Gas Company formerly manufactured gas by the coal-gas and the water-gas processes at plants in the Borough of Manhattan, but since the physical retirement of its East Fourteenth Street and West Forty-Second Street coal-gas plants, in October, 1923, it has manufactured gas only by the water-gas process, supplemented by the gas plant of The Astoria Light, Heat and Power [fol. 110] Company in Astoria, and distributes the gas in the Borough of Manhattan. The Astoria Light, Heat and Power Company has a large plant in Astoria, Long Island City, in the Borough of Queens, at which it manufactures gas by the coal-gas and the water-gas processes; it has but a few private consumers, in the vicinity of its plant, to whom it distributes gas. The Standard Gas Light Company of the City of New York manufactures water-gas at its plant located between East 114th and East 116th Streets, and between Pleasant Avenue and the East River, in the Borough of Manhattan, and distributes gas to its consumers in the Boroughs of Manhattan and The Bronx. The New Amsterdam Gas Company manufactures water-gas at Ravenswood, in the Borough of Queens, and distributes gas to its consumers in the Borough of Manhattan. The East River Gas Company of Long Island City distributes gas to its consumers in the Boroughs of Queens and Manhattan. The Central Union Gas Company manufactures coal-gas and water-gas, and distributes gas to its consumers in

the Twenty-third Ward of the Borough of The Bronx. The Northern Union Gas Company does not manufacture gas, but distributes gas, which it obtains from other companies, to its consumers in the Twenty-fourth Ward of the Borough of The Bronx. These companies comprise what is commonly referred to as the transfer-of-gas system of the Consolidated Gas Company.

The New York and Queens Gas Company manufactures water-gas at its own plant in Flushing, in the Borough of Queens, and distributes the gas in the Third Ward of the Borough of Queens. The Bronx Gas and Electric Company manufactures water-gas at its own plant in the Borough of The Bronx, and distributes the gas in that portion of the [fol. 111] Borough of The Bronx lying east of the Bronx River. The manufacturing plants and distributing systems of these two companies are operated as units separate from the Consolidated transfer-of-gas system, and are wholly detached from the plants and distributing system of the Consolidated system companies.

The various companies are each maintained as separate entities, and each has its own board of directors, executive officers and departmental managers. The manufacture and distribution of gas by the New York and Queens Gas Company and by The Bronx Gas and Electric Company are conducted as separate enterprises, entirely apart from the manufacture and distribution of gas by the other companies. However, such advantages and economies as can be effected for the operations and business of the New York and Queens Gas Company and The Bronx Gas and Electric Company through purchases of coal, oil and other materials, or, through the availability of the extensive experience of executives and technical officers and employes of the Consolidated Gas Company, are also afforded to the New York and Queens Gas Company and The Bronx Gas and Electric Company.

Intercompany Relations

The development of the inter-relationship of the gas companies of the Consolidated transfer-of-gas system has been greatly in the interest of the public, as well as of the companies and the investors in their property.

For a number of years prior to 1900, the gas companies

operating in the Borough of Manhattan and certain por- [fol. 112] tions of The Bronx were engaged in competition which was detrimental to the public no less than to the several companies, involving wasteful efforts and expenditures and duplications of investment and consequent high carrying costs. In or about the year 1900, the Consolidated Gas Company acquired its holdings of the capital stock of the other companies operating within the Borough of Manhattan, and indirectly the capital stock of The East River Gas Company, the Northern Union Gas Company and the Central Union Gas Company.

It was then determined to discontinue any further unnecessary duplication of investment either in plant, mains or services. This course not only terminated the waste due to duplication of properties, but enabled the companies, by an intensive use of their properties, the centralization of certain services, the joint use of facilities, the extending of gas facilities owned by one gas company for use by another gas company, the purchase of materials and supplies in large quantities, the standardization of methods, and the interchange of information as to improvements and developments in the art, etc., to effect economies in operating costs, property investments, and carrying charges. Out of this co-ordination of the facilities and operations of the companies grew a system of inter-company charges therefor.

When the policy was adopted of discontinuing any further unnecessary and avoidable duplication of investment in mains and services, it became a question of utilizing the existing distribution systems to the maximum advantage to the public. In order, therefore, to insure an adequate supply of gas at all times throughout the city, maintain the utmost uniformity of pressure and insure uninterrupted [fol. 113] service by facilitating the interchange of gas between the various companies, the storage holders and gas mains of various companies were gradually tied in and interconnected. Aside from the tying-in of mains due to the foregoing considerations, there has been considerable tying-in, in the Borough of Manhattan, occasioned by the extensive subway construction by the City of New York in recent years, which has at many places necessitated the installation of single surface or overhead by-passes in place

of such mains of the various companies as were temporarily rendered unavailable for use, because of the conditions created by the subway construction.

The holder stations and distribution mains of the plaintiff are, at certain points, connected with what is commonly referred to as the gas-transfer system of the Consolidated Gas Company, in Manhattan, The Bronx, and Long Island City. This interconnection of mains enables an exchange of gas between the distribution systems of the Consolidated Gas Company of New York, the New Amsterdam Gas Company, The East River Gas Company of Long Island City, The Standard Gas Light Company of the City of New York, the Central Union Gas Company, the Northern Union Gas Company, and The Astoria Light, Heat and Power Company.

The holders and the transmission and distribution mains of each of the companies named are connected, at suitable points, with the general transfer system, so that the gas manufactured in any plant can be delivered into this general transfer system and from its transmission main can be taken into the holders and distribution mains of the other companies connected with this transfer system. In this way, the gas made by all of the companies is delivered into [fol. 114] the general transfer system, to ensure adequacy and continuity of the supply of gas, in that the manufacturing capacity of each plant on the transfer system is made available toward meeting the requirements of all the companies on the transfer system; and the required reserve plant capacity, being available to all of the companies at the same time, is much less in ratio than would be essential if each company operated independently, without any interconnection of mains, and so had each to provide all of its own reserve capacity in its own plants.

A further advantage accrues to the consumers of all the companies by these interconnections, in the protection and assurance which it affords against interruptions in the supply of gas through accident or catastrophe. If a given company finds that, either temporarily or permanently, it has not plant capacity of its own sufficient to meet the requirements of its own consumers, it secures the use of the additional plant capacity necessary for its service, from a company having plant capacity in excess of the present

and immediately-prospective requirements of such company; and for such manufacturing capacity thus devoted to its use by the producing company, it pays a sum covering taxes, insurance, renewals and replacements, and a return of 8 per cent on investment, and it purchases from the producing company the additional quantity of gas required by its consumers, and pays therefor to the producing company the cost of the gas produced, being governed, as to the amount of gas so purchased, by the demands of its consumers and the practical operating conditions in its own manufacturing plant.

As an inevitable result of the foregoing, it has become impracticable, as an engineering matter, to identify the gas [fol. 115] in most of the holders and gas mains as having been manufactured at any particular plant or by any particular company. After the gas, manufactured in a plant of the Consolidated Gas Company or of one of its affiliated companies, has left the plant, no attempt is made thereafter to identify it as to source. Its production has been standardized as to materials, method, and calorific content. Even if delivered from the manufacturing plant immediately into a distribution main, it would almost immediately become mixed with gas emanating from some other point and manufactured at some other plant of the system. It would be impossible for any manufacturing or holder station so to control the pressure at these points as to regulate exactly the amount of gas being supplied into the mains by each company, without at the same time affecting, disadvantageously to the public, the pressure at many other points. As the result of interconnecting the distributing systems of the companies operating within the same territory, a certain amount of gas is exchanged due to no other cause than the variation in the pressure in the gas mains at certain points where they interlock, such variation being due to the normal fluctuations in the use of gas by consumers in the different areas; so that if each company had manufacturing plant capacity fully adequate for all of its own requirements, there would, nevertheless, occur some interchange of gas between the companies whose mains were thus connected. The amount of gas exchanged between the companies is, therefore, not a matter of exact control, and could not economically or practically be subject to such control.

The five important factors in connection with the gas [fol. 116] transactions of each of the gas companies in the transfer system are:

(a) the quantity of gas on hand at the beginning and end of the month;
(b) the quantity of gas manufactured;
(c) the quantity of gas sent out;
(d) the quantity of gas sold;
(e) the quantity of gas used by the company.

At the manufacturing plants of the plaintiff and the affiliated companies on the transfer-of-gas system, hourly records are kept of the quantiy of gas made as recorded by the station meters. At all of the manufacturing plants and holder stations, hourly records are kept of the quantity of gas on hand and gas sent out. Daily reports of the details of the manufacture and send-out of gas by each of the gas companies of the Consolidated transfer-of-gas system are filed with the plaintiff, and monthly and periodic statements are similarly made of the operating details of each company, which become the basis of determining the quantities of gas interchanged among the companies.

The factors used in determining the quantity of gas interchanged among the companies in a calendar month are based upon the following:

1. The amount of gas sent out by each company's manufacturing plants.

2. The amount of gas accounted for by each company as being sold to its consumers and as used by the company in its own offices and plants.

3. The difference between the aggregates of items "(1)" and "(2)" indicates the total amount of gas unaccounted [fol. 117] for by all companies.

4. The unaccounted for gas is distributed among the companies according to calculations made by the engineers of the companies, so as to apportion to each company the unaccounted for quantity attributable to the distribution of gas for its own consumers.

5. Combining the amount of gas accounted for by each company (2) and the amount of unaccounted for applica-

ble to its gas business (4), gives what may be termed the total requirements of each company.

6. Comparing the amount of gas sent out by each company's manufacturing plant (1) with the same company's total requirement (5), indicates which is a creditor and which is a debtor company, the agreement under which gas is interchanged indicating the particular creditor company to which each debtor company is a debtor.

7. The creditor company bills the debtor company for the amount of gas shown by the foregoing computation to have been manufactured by it for such debtor.

The other companies of the Consolidated transfer-of-gas system take and pay for all of the gas sent out by The Astoria Light, Heat and Power Company, excepting that used by the Astoria Company in its plant and a small quantity sold to a few consumers in the immediate vicinity of the plant, and have done so since the Astoria Company began manufacturing gas in December, 1906.

[The intercompany charges made for services, materials or the use of facilities, are intended to include the actual cost of labor and materials furnished by one company for [fol. 118] the benefit of another, the actual maintenance cost of property used, the carrying cost, at an 8 per cent rate of interest, of the investment devoted by one company to another's use, and, where reasonable and proper, an added charge for undistributed expenses.]

[The fact that one company or another performs the service or makes the investment in the property jointly used by several or all of the companies, tends to decrease the amount of necessary investment and hence to lessen the cost of the service to the consumers, taking all elements into account. The company which possesses the facilities or commands the forces, either by reason of a prior location, a franchise right or adaptability for the work, renders the service or lets the use of facilities to the other company. The creditor company economizes in its own expenses by reason of the intensive and full utilization of its property, and the smaller cost per unit of service. The debtor company effects corresponding economies, minimizes invest-

ment and carrying costs, avoids duplication and receives service or the use of property at cost.]

The practice of the companies in respect to prorating expenditures and carrying costs for the benefit of two or more of them is illustrated by the charges made by the plaintiff to affiliated companies, during the years 1922 and 1923. These charges fall within the general classifications of (a) departmental expenses, (b) services of employees, (c) use of facilities, (d) employees' societies, and (e) labor and materials furnished.

For the services of the Consolidated Gas Company's engineers and superintendents in connection with construc-
[fol. 119] tion projects, as reflected in the account "engineering and superintendence," the plaintiff charges the other companies their respective proportions of the expenses of the construction department on the basis of the ratio of the construction expenditures of each company to the total expenditures of all the companies for construction work during the calendar year. The cost of maintaining the department of mains and services, including the several branches, is prorated among the plaintiff and the other gas companies in Manhattan according to the ratio of each company's miles of mains to the total miles of mains. [The cost of maintaining the gas promotion department is pro-rated among the companies on the basis of the ratio of the number of gas appliances of each company on the district to the total number on the district at the beginning of the year. For maintaining the department of claims and arrears, for maintaining the recording pressure gauges at various localities in the Borough of Manhattan, for operating for joint use the 63rd Street gas storage station and the Kingsbridge gas storage station, for maintaining the chemical department, including the operating of the chemical laboratory, for maintaining the office of the advertising manager, for maintaining and operating the general office restaurant for employees, for maintaining the meter shop school of instruction, for pumping drips, and for the personal services of certain employees, and the like, the costs are apportioned among the companies directly benefitting, upon an equitable and fair basis equally applicable to the plaintiff and to each interested company.]

[For the use of space in the General Office Building of

the plaintiff, the charges are made to affiliated companies [fol. 120] upon the basis of the number of square feet occupied at various rates according to location, and include only the proportion of the operating and maintenance expenses applicable to such rented space and of the carrying cost, of the investment in the rented portion of the building. A charge is made by the plaintiff to other gas companies for the use of the former's property jointly used, and such charges are prorated according to the extent of use and include a proportionate share of the maintenance expense and the carrying cost, of the investment in the property devoted to the use of other companies and used by them. The expenses in connection with the maintenance of the gas companies' employees' mutual aid society and other employees' societies are pro-rated on the basis of the relative membership of the employees of each company in such organization.]

Materials and labor are furnished by the plaintiff to the other gas companies at cost plus a percentage to cover indirect expenses actually incurred. The amounts representing the added percentages are credited to certain expense accounts of the plaintiff and offset equivalent undistributable and unsegregated amounts of operating expenses. Such materials and labor are furnished by the Department of Mains and Services, in connection with street work, such as laying new mains and services, repairing mains and services, etc., and by the automobile repair shop in connection with repairing and overhauling automobiles. In this category are, also, gas appliances delivered from the plaintiff's stock to affiliated gas companies.

In these and in other ways, the plaintiff and its affiliated companies are enabled, through such co-operation, to effect [fol. 121] savings in the amount of property and in the operating expenses, while securing at least as good results as, and in many instances better results than each company could secure by independent operation. The plaintiff maintains an emergency department, which has five separately located stations in the Borough of Manhattan, equipped with vehicles and apparatus for responding to fire calls in co-operation with the fire department of the City of New York or for any emergency that may occur by reason of any leak of gas, and responding with the greatest expedition to

any call. Each Manhattan company, if operating alone, would be obliged individually to maintain several of such stations, at a cost greatly exceeding that which it pays as its proportionate share of the maintenance cost of the existing stations, and would not have the benefit of as many stations and as quick service as it now has, and with the resultant confusion of duplicate emergency crews responding to calls, and the addition of fast-moving motor vehicles to the traffic confusion on already-crowded streets.

Methods of Business

The plaintiff itself at the time the action in question took effect had manufacturing plants of its own on Manhattan Island at Eleventh, Fourteenth, Twenty-first, Forty-second and Ninety-ninth Streets, the Eleventh, Twenty-first and Ninety-ninth being water gas plants only, and the Fourteenth and Forty-second Street plants being constructed as coal gas plants only.

In June of 1923, the two latter plants were used only as reserve or stand-by plants, and had been so used and maintained for some years past, a very small amount of gas hav-
[fol. 122] ing been actually manufactured at either plant, although both plants were kept in a condition to be operated to capacity should the occasion arise. These two plants were withdrawn from service on October 31, 1923, the capacity of the Twenty-first Street water-gas plant having been increased to an amount at least equalling that of the two plants discontinued, so that the manufacturing capacity owned and operated by the plaintiff at the present time is substantially the same as it was on June 1, 1923, although differently distributed.

As before stated, the plaintiff owns all of the stock of The Astoria Light, Heat & Power Company, situated at Astoria, Long Island, where have been erected two water gas and two coal gas units with a combined daily capacity of some 86,000 M. cubic feet, substantially all of which is available for sale to other companies as it sells and uses itself only some 57 M. cubic feet. The New Amsterdam Gas Company, as the owner of the Ravenswood plant at Long Island City, has also between 9,000 and 10,000 M. cubic feet of daily manufacturing plant capacity over and above its own needs. All the other companies in the Con-

solidated system have, and with the exception of the former New York Mutual Gas Light Company (up to August 30, 1922), have had during the period litigated before me, a manufacturing capacity less than their individual requirements, and were compelled to buy gas manufactured at either the Astoria or the New Amsterdam plants.

The Consolidated Company manufactures about two-fifths of its total requirements and buys the rest from the Astoria Company. The balance manufactured by the Astoria Company and the surplus manufactured by the New Amsterdam Company is sold to the other system companies.

[fol. 123] In this connection it is proper to state something of the arrangement of the storage and distribution systems by which the gas is distributed throughout the Borough of Manhattan by the plaintiff company and the other companies on the transfer system.

Gas from the Ravenswood plant of the New Amsterdam Company and the Astoria plant of the Astoria Company passes through the Ravenswood and Astoria tunnels, under the East River, to points on Manhattan Island, and there has been constructed a system of interlocking transfer mains by which gas which is manufactured at these plants or at any plant of any company in the so-called transfer system can be furnished, through storage holders and transfer mains, to the distributing mains of any company, so that if one company has a surplus and another a deficiency of supply the surplus is available, and in this way the entire reserve of the system is available to any company. It also, however, makes it difficult, if not impossible, to say that gas supplied to the consumers of any company is entirely manufactured by any one of the companies or plants operated by such company. This is one of the difficulties in attempting to determine the actual cost of manufacturing and distribution of gas as applied to any individual company.

As a matter of fact, it is well known that the Public Service Commission of this State has stated that the proper way to consider the subject would be to treat the plaintiff company and the New Amsterdam, the East River, Central Union, Northern Union, Standard, and The Astoria Companies as one system, rather than to attempt to con-

sider and treat the companies individually, and to regard The Astoria Light, Heat & Power Company as merely a [fol. 124] manufacturing plant of the system, as it is in effect. It seems clear that this method of operation results in marked economies, for the reason that it permits the purchase of supplies for the companies as a whole and their availability for any company as needed and the elimination of separate construction departments, and lessens the necessity of each manufacturing company maintaining its own reserve manufacturing plant and holder capacity. Treating the Astoria plant as a manufacturing plant of the Consolidated Company alone would give the Consolidated and New Amsterdam Companies a capacity and a reserve in excess of the present needs of their own patrons and the other companies would not have sufficient output and reserve for their present needs, and would be obliged to construct additional manufacturing facilities for their own use.

Even treating the companies as comprising one system, there is less than twenty per cent of reserve capacity, and whenever the reserve falls below that amount both the plaintiff's and defendants' witnesses agree that additional reserve manufacturing capacity should be provided. To meet this condition the plaintiff has purchased a tract of land at Hunts Point on the East River, and proposes to construct, beginning in 1925, additional manufacturing capacity there, for operation as soon as completed, and to develop the property in accordance with the needs of the business through a period probably running in the neighborhood of ten years. Engineer and expert witnesses for both plaintiff and defendants agree that a certain proportion of the production would preferably be of coal gas, irrespective of its relative cost at the present time, so as to preserve a flexibility to meet conditions which might be encountered in the operation of gas plants; but both agree [fol. 125] that coal gas plants cannot be operated, and so should not be built, if gas must be produced to be delivered to the consumer at a minimum standard of 650 B. t. u. This is one of the reasons why the plans for the full future development of the Hunts Point plant had not been determined at the time testimony closed before me. The construction of certain coal gas units is desired, and their

construction cannot be safely undertaken while this provision of the statute remains upon the books.

Incidentally, it may be stated that inasmuch as both the plaintiff and the defendants' witnesses agree that this portion of the statute would prevent the use of coal gas plants now owned and operated by the Astoria Company and would have prevented the use of the 14th and 42nd Street plants down to their abandonment late in 1923, it would have been, and would now be, in view of the evidence in this case, an illegal confiscation of such property, and therefore, obnoxious to the Constitution, if The Astoria Company is merely a manufacturing department of the Consolidated Company, as is the way in which it was treated by Judge Hand in the former suit and is here taken.

In the operation of this gas business in New York, while the corporate entity of the different companies has been preserved, and each has its own separate organization and operation in many respects, the Consolidated Gas Company has exercised its control to the extent of making contracts for oil, gas and some other major supplies for joint requirements of the companies, including the Astoria Company, and supervises and in some instances performs the work of new construction, of extensions and repairs to mains and services.

[fol. 126] In the case of Willcox v. Consolidated Gas Company (212 U. S. 19), it was held by the Supreme Court that in determining the amount and value of property on which this plaintiff is constitutionally entitled to earn a fair return, the value of the property at the time of the inquiry must be adopted. In the second series of litigation as to this plaintiff's rates (Newton v. Consolidated Gas Company, 267 Fed. 231; 258 U. S. 165), it was found that the value of the company's property, for the purposes of that case, was at least the amount of the actual and unimpaired investment therein, and that sum was sufficient to demonstrate the confiscatory character of the Eighty-cent rate then under review.

In the present case, although the plaintiff has proven the amount of the investment in all of the property used in serving its consumers, it has also offered evidence to establish what it claims as the present reproduction cost, and insists strenuously that the latter is the true economic

measure of the present value which it is the duty of the Court to find as the "rate base." In its reproduction costs of its property, over and above the "bare-bones" cost of its inventoried physical property if replaced on a sub-contract basis, the plaintiff includes certain undistributed structural costs applicable to such construction project, and also claims and offered a considerable amount of evidence as to going value, and on the subject of the proper allowance for working or floating capital.

The Supreme Court of the United States has laid down the rule that it is present value of the company's property [fol. 127] used for the benefit of the public upon which it is entitled to earn a reasonable return.

San Diego Land &c. Co. v. National City, 174 U. S. 139; San Diego Land &c. Co. v. Jasper, 189 U. S. 439; Stanislaus Co. v. San Joakim, 199 U. S. 220; Willcox v. Consolidated Gas Co., supra; Minnesota Rate Cases, 230 U. S. 352; Des Moines Gas Co. v. Des Moines, 238 U. S. 153; Bluefields Water Works v. Public Service Com. 262 U. S. 679; Lincoln Gas Co. v. Lincoln, 250 U. S. 256; Southwestern Bell Telephone Co. v. Public Service Commission, 262 U. S. 277, and many other cases.

The difficulty lies in determining the manner in which such present value is to be computed and found. It is true that the Supreme Court of the United States, in the very recent case of Georgia Railway & Power Company v. Railway Commission of Georgia, 260 U. S. 625, and Bluefields Land & Water Company v. Public Service Commission (supra), reiterated its approval of the doctrine of Smythe v. Ames, 169 U. S. 466, 546, 547, that, "the original cost of construction, the amount expended in permanent improvements, the amount and market value of its bonds and stock, the present as compared with the original cost of construction, the probable earning capacity of the property under particular rates prescribed by statute and the sum required to meet operating expenses, are all matters for consideration, and are to be given such weight as may be just and right in each case," but just how this rule is to be applied, and just how much and what weight is to be given each element therein referred to, is left undetermined and is not rendered clear by any of the recent decisions of

that Court. In the Southwestern Bell Telephone Company case (supra) and the Bluefields Water Works case (supra), [fol. 128] it was held that the reproduction cost is the dominant and determining element in determining the full present value on which a fair return is held a constitutional right. In the latter case the finding of the Commission was set aside because it was deemed that due regard had not been given to reproduction cost as of the time of inquiry.

On the other hand, in the Georgia Railway & Power case (supra), the Supreme Court refused to set aside a finding of a Commission, and indicated that reproduction cost at the date of the inquiry was not necessarily controlling. That eminent member of the Court, Mr. Justice McKenna, stated that he was unable to reconcile the decision in the cases referred to. Then Mr. Justice Brandeis, in an elaborate dissenting opinion, in which he reviews the subject with great ability, has taken the position that original or historical cost is the proper "rate base," and in this he has the support of Mr. Justice Holmes. It is apparent, therefore, that even in this Court of last resort there is as yet no unanimity on the subject of how present value is to be ascertained.

There is another feature present in many of the cases decided which adds to this confusion. Although refusing to accept full current reproduction costs as the measure of present value, the courts and commissions have commonly allowed the appreciated value of the *land* on which the company's business is carried on; and this has been done contemporaneously with a refusal to allow the appreciated value of the buildings and manufacturing plants erected thereon. Instances of this occur in Bronx Gas & Electric Company v. Prendergast, 28 N. Y. State Dept. [fol. 129] Repts. 329; P. U. R. 1923A, 255; 22 Rate Research, 83; 190 App. Div. 13; Brooklyn Borough Gas Company v. P. S. C., 17 N. Y. St. Dep. Rep. 81; P. U. R. 1923, 335 (in which former Justice Charles E. Hughes was the referee); the Georgia Railway & Power Company case (supra), and other cases.

To my mind there is an inconsistency about this holding which I cannot reconcile. I cannot see any reason, and know of no legal principle which justifies a different treatment of one part of a public utility's property from an-

other. It seems to me the Supreme Court of the United States must finally take a clear and definite position one way or the other. The Court must say that it is the present reproduction cost of all of the property either with or without depreciation as the proof in the specific case may require, which is to furnish the basis upon which a public utility company must be permitted to earn a fair and reasonable return at the present rates for money, or that it is the original cost of the same property plus net additions to date, perhaps with the same proviso as to depreciation, but with the rate of return adjusted so that the property will earn for its owners a present return varying with the purchasing power of a dollar.

Assuming a plant originally costing a million dollars in pre-war times and earning and entitled at the time of its construction to earn eight per cent, the owners would receive $80,000 annually, in money worth one hundred cents on the dollar. If today it would cost two million dollars to reproduce the same plant and the owners received and were entitled to receive eight per cent, they would receive $160,000; but if their $160,000 is only worth fifty cents on the dollar, they would be receiving in fact [fol. 130] and real value only the same as they received in pre-war times when the purchasing power of the dollar is considered (which, in fact, is the only true measure of return), although their capital investment may have a present value apparently of twice its original cost. Or if the process is reversed and instead of taking the present reproduction value of the plant the rate of return on the original investment is increased in accordance with the depreciation of the dollar, and the owner receives 16 per cent on the original cost, the same result is obtained. The converse of the proposition is of course true, and if the dollar has appreciated to the same extent the result can be regulated by so adjusting the rate that the return will be decreased in proportion. An extremely able discussion of this subject is found in Judge Learned Hand's decision in Newton vs. Consolidated Gas Company (267 Fed. 231; 258 U. S. 165), with which I am in full accord. It is of extreme importance that some definite method or standards for ascertaining the present value of property devoted to public uses should soon be adopted, and that the present

vagueness and uncertainty as to how present value is to be found should be terminated. It would be much easier in these days of regulatory commissions, where both original investments and additions thereto are subject to scrutiny to use the investment basis and additions thereto, and adjust the return, as the purchasing power of the income appreciates or depreciates, by varying the rate of return, and so the rate to be charged consumers. Of course operating expenses and return at different rates are necessarily to be taken into consideration, but the probative value of evidence as to the amount and market value of bonds and [ofl. 131] stocks is not so clear. These latter may and frequently do fluctuate greatly and are affected by conditions bearing but slight relation to the intrinsic value or earning capacity of the property, and in the case of this plaintiff these factors have ceased to have a bearing, as the plaintiff owns stock control of both gas and electric companies, aside from its own gas operations, and the value of its stock is not now dependent upon its own gas properties and the return received therefrom, nor are its earnings the product of the gas business alone.

In view of the present lack of a clear definition as to the manner in which present value is to be ascertained, I have taken fully the proofs both as to the original investment and additions thereto, and as to the reproduction cost at the present time (and the present condition of the property); and I have made findings as to both, as well as finding an amount which, in my opinion, represents the present fair value of property, giving due consideration to all the elements entering into it, as I understand to be required by the rule laid down by the Supreme Court of the United States in its approval of Smythe v. Des Moines (supra). I have also found an amount as going value under Des Moines Gas Company v. Des Moines (supra), and Denver Union Water Company, 246 U. S. 178, and other cases, and of the valuation of "franchises and rights" as determined by the Supreme Court as to this plaintiff in Wilcox v. Consolidated Gas Company in 1909.

Counsel for the defendant Public Service Commission asks that no finding be made as to rate base or operating expenses if a finding is made that the statute violates the contract provision of the constitution. Inasmuch, however, as

[fol. 132] I am directed to find fully on all the matters referred to me, I believe it is my duty to find and pass on these questions, leaving it to the court to make its decree on such grounds as seem to it most desirable. In this decision I am confirmed by the opinion and the decree of Judge Winslow in the recent New York and Queens Company case (1 Fed. Repr., Second Series, 351, P. U. R. 1924 B, 138; P. U. R. 1924 E, 60; 24 Rate Research 100, 25 Rate Research 35).

In connection with both the investment and reproduction cost of plaintiff's property used and useful in the gas business is the determination of what properties are so used and their value. This relates especially to the land and plant values of certain properties which are specifically sought to be excluded by defendants.

Land

The defendants contend that of the real estate owned by the complainant the sites of the 14th and 42nd Street plants and a part of the site of the Kingsbridge holder are not used and useful and should not be included in the rate base. As to the latter I am inclined to agree with the defendants, and deduct one-third of the value thereof. The plaintiff's witnesses in fixing a value on that property testified that it had been so valued by reason of the fact that it could be used for certain enumerated purposes. The northern portion is cut off from the portion occupied by the holder and buildings by a fence. It has been used apparently only as a tennis court. It brings in little if any revenue. If it has the value placed on it by plaintiff's [fol. 133] witnesses for the purposes mentioned, it should be sold for such purposes.

As to the 14th and 42nd Street plants, I must be governed by the evidence before me as to the use made of the property and the necessity therefor. I do not think it was successfully disputed that on June 1, 1923, both plants were being kept up as reserve plants and could have been put in operation if the necessity arose within a comparatively short time. The machinery and equipment was there in good working order and, while the company very properly did not maintain there a full working complement of gas making labor, they could have been transferred from

some of the other plants and the plants brought to capacity in a week, as Mr. Woods testified. I do not understand that Mr. Little, defendants' expert witness, disputes this fact. Undoubtedly the necessity of making gas there had not arisen for several years (since 1920), and the company was in 1923 in the process of adding to the 21st Street gas plant sufficient capacity to enable it to abandon the 14th and 42nd Street plants, which were objectionable for year-round operation in the Borough of Manhattan on account of being coal gas plants.

It is true the company had decided in 1923 that it would be advantageous to abandon these plants, but only when equal capacity had been constructed elsewhere. In the meantime, they had also purchased the land at Hunts Point and were arranging for the construction of large manufacturing units at that place. This latter project met with the approval of Mr. Little, the defendants' expert engineer, although he did not advise the abandonment of the Manhattan plants until the Hunts Point project had been in-
[fol. 134] itiated and the substitute capacity actually made available at the 21st Street plant.

In the December 31, 1923, rate base, the 14th and 42nd Street plants are not included. They had been withdrawn from the fixed capital account, as they had been sold and dismantled, and the Hunts Point property had been purchased and added. One of the grounds for claiming that these two plants should be disregarded altogether in the rate base is the fact that when withdrawn the gas-making machinery was junked. The evidence, however, shows that this is the case in almost every instance where a gas plant or parts of it are discarded. There is practically no market for it, and machinery and apparatus which when installed gives as good service as when new, becomes worthless when removed, or substantially so. Except for the desirability of removing coal-gas plants from Manhattan Island and the purchase and prospective installations at Hunts Point, which contemplate an addition of probably 30,000,000 cubic feet of daily capacity within the coming year or two, it would not have been safe to abandon these two plants, as even with the additional capacity installed at 21st Street the reserve is below the point at which Mr. Little said the company should create additional capacity.

As to the Hunts Point property purchased at an expense of $2,265,103, I do not think it can be included at its full value in the plaintiff's rate base for two reasons. First, it is a projected development for the benefit of the whole system, and not for the plaintiff alone; second, it is not planned to develop it all at once, but through a period of from seven to fourteen years. The desirability and pro- [fol. 135] priety of this purchase is conceded by defendants' witness, Mr. Little. While he does not advocate the removal of the present water-gas plants of the plaintiff on Manhattan Island and, in fact, says it would not be safe to do so within a period of five years, during which substitute capacity could be installed elsewhere, he says it would be good judgment to develop at least one other large plant, and that to provide for the growth of business it would be proper to have it located in the upper part of the city, as the Hunts Point property is. If it were to be all developed immediately and it was for the benefit of the plaintiff, it would eliminate entirely the use of a portion of the Astoria plant for the plaintiff's benefit, and thus reduce its rate base in that particular. If it is only to be used partially for the plaintiff at the present time and the same use is to be continued of the Astoria and East River properties, then not the whole of the Hunts Point property should be included in the plaintiff's rate base. In view of the fact that no plant has yet been erected, and the fact that just how the gas to be made there will be used is not known, I think it proper to allow but $500,000 therefore in the present rate base.

The Present Value of the Land

This brings me to the question of the value to be accorded to the land so found used and useful.

There has been presented to me the opinions of two real estate experts on behalf of the plaintiff and two on behalf of the defendant Attorney General, together with the assessed valuation of the respective parcels for the year 1924 made by the Deputy Tax Commissioners of the City of New York. The witnesses are all men of large experience, who have been engaged in valuing property in and about this [fol. 136] locality for many years. The plaintiff's witnesses are connected with two of the largest real estate

companies in the city. The defendants' witnesses have been more particularly engaged in appraisals than in the general real estate business. As is usual where real estate experts are put on the stand to testify as to the value of different parcels of real estate, there is found a considerable difference in their views not alone between those for the plaintiff and defendant, but between the two witnesses for each. This applies both to the property of the plaintiff and that of the other companies used by the plaintiff for the benefit of its consumers. These witnesses have been examined fully as to the basis on which they made their respective estimates and the data on which they based their figures.

I have gone over the various appraisals and the testimony in regard to each with great care and particularly with a view to arriving at the best judgment I could give as to the amount which would be fair and reasonable with these conflicting opinions before me. In my judgment the reasonable fair value of the land (unimproved) of the plaintiff on June 1, 1923, including the 14th and 42nd Street plants, but excluding one-third of the value of the Kingsbridge holder land and taking off 61.8 per cent of the joint office building leaves $13,460,000 as the value of the land of the plaintiff used in the gas business.

In addition thereto there is the land of other companies used by the Consolidated for the benefit of its consumers. What has been said as to the testimony as to the land of the Consolidated Company applies to this, as the same witnesses were used and similar testimony introduced. I have [fol. 137] valued the land of the Astoria Company at the sum of $4,350,000. Deducting the portion of the Luyster Creek coal-handling and storage property devoted to the use of The New York Edition Company ($210,000) and apportioning the remainder on the basis of the Woods' report gives 80.074419 per cent thereof, or $3,314,373.94 as the value of the portion used by the Consolidated Company. I have valued the land of the Standard Gas Light Company jointly used by the plaintiff at $52,000. Deducting two-thirds thereof being the portion used for other companies, leaves $17,333 as the value of its land used by the plaintiff. The land of the East River Gas Company I have valued at $62,000. Deducting the proportion thereof as set forth in

the Woods' report gives $34,996 as the value of that part used by the plaintiff. Summarizing these values gives the value of the land of the plaintiff and other companies used in the gas business, unimproved, as of June 1, 1923, as follows:

Consolidated Gas Company	$13,460,000
Astoria Light, H. & P. Co.	3,314,373
Standard Gas Light Co.	17,333
East River Gas Co.	34,996
Total	$16,826,602

This total had changed on December 31, 1923, and as of the present time by the withdrawal of the 14th and 42nd Street properties for land sold, valued at $3,547,055, and for the parcel at 42nd Street still owned, valued at $135,000, not claimed in the gas business after the withdrawal of the station, and by the addition of the portion of the value of the Hunts Point property included herein, $500,000, and by the parcel of land adjoining the 132nd Street Station property purchased at a price of $20,000, making the value of the land of the plaintiff owned and used in the gas business, as of December 31, 1923, $13,664,547.

[fol. 138] Astoria Tunnel

Practically the only testimony introduced by the defendant Attorney General contradicting the evidence of the plaintiff as to present values (aside from the land) was to the reproduction cost of the Astoria Tunnel through which the gas from the Astoria works is conveyed to the distributing system in Manhattan. Plaintiff offered the testimony of Mr. John Vipond Davies, one of the engineers who originally had charge of the construction of this tunnel, and the defendant Attorney General that of Mr. Snow, an engineer in the employ of the City of New York as Tunnel Engineer in the Board of Estimate and Apportionment. Both are well known, of wide experience, and of high standing in their profession. Mr. Davies estimated that it would cost to reconstruct the tunnel as of June 1, 1923, the sum of $8,750,676; Mr. Snow that it would cost at least $5,708,582. The East River Gas Company's investment in

the tunnel was the sum of $4,691,897.68 as of December 31, 1922. Mr. Davies's estimate represents an increase from the original cost of something like 87 per cent; Mr. Snow's about 21 per cent. Both have explained the methods they used to arrive at their results. Mr. Snow was handicapped to some extent by the necessity of taking a great deal of the data from which to make his estimates from a paper read by Mr. Davies some years ago before the Society of Civil Engineers, which data Mr. Davies testified was incomplete and did not contain all the items of cost of the tunnel. The different manner in which they arrived at their figures also rendered it difficult to make exact comparisons.

I think a great deal of the difference in the two estimates [fol. 139] is due to the fact that Mr. Snow did not have the full and complete information which was in Mr. Davies's possession in making his estimate. I cannot believe that a work of that magnitude and character could be constructed at present at an increased cost of only 21 per cent over its original cost in 1910, having in mind the tremendous increase during and since the war in the cost of materials and labor. Mr. Snow admitted to certain omissions which increased his estimate to $5,903,884. After a careful examination of the testimony of both these gentlemen, I have come to the conclusion that a figure of $7,750,000, which is about a 65 per cent increase over the original cost, is an amount which is a reasonable one, and I have so taken it.

Land Claimed Not to be Owned by Plaintiff

While there was some assertion on the trial that there was a question as to the land within the bed of Twelfth Avenue between 41st and 42nd Street and the North River, defendant's attack was principally upon the title to the land within the lines of the so-called Tompkins Street between 12th and 13th Streets. There is no question but that both parcels are and have been for a period greatly in excess of twenty years enclosed and in full use and occupancy by the complainant and were so used and occupied on June 1, 1923, and at the time of the hearing. Buildings are on some portions thereof, and other parts are used for necessary storage and other uses incidental to the manufacturing plants thereon established. The City has levied

assessments upon and collected taxes from the plaintiff on the theory of their ownership by it. No evidence was [fol. 140] given that either had been legally opened as City highways, and as to Tompkins Street the contrary was shown. The question as to the effect of adverse possession on the title to a City-owned and opened street does not enter into the case.

Although I felt compelled to disagree with the plaintiff's contention that the title to these properties could not be raised in this proceeding (for which it cited Willcox v. Consolidated Gas Company, 157 Fed. 849, 858), I feel that the plaintiff's title to, and its right to have the property taken into the rate base, has been sustained. While the question as to the title to the bed of Tompkins Street between 12th and 13th Streets has not been directly before the Court, it has as to that portion betwen 15th and 16th Streets and between 14th and 15th Streets, and on practically the identical state of facts the Courts held against the claim of the City of New York (Matter of the City of New York, 217 N. Y. 1; Consolidated Gas Company v. City of New York, Gavegan, J.) The former case contains a full statement of the facts and law applicable to the question. It is unnecessary to repeat it here. Furthermore, it may be said in passing that as long ago as 1854 the City of New York contended that Tompkins Street was not in existence (Nott v. Thayer, 2 Bos. 10).

I think the plaintiff's witnesses correctly took into consideration the value of the entire property occupied by the plaintiff between 12th and 13th Streets and between 41st and 42nd Streets, and I have included it in the rate base.

It is also necessary to determine two other questions which enter into the value of the property under all conditions. They are the amount to be allowed for working [fol. 141] capital, and for going value.

Working Capital

The matter of working capital furnishes another illustration of the difficulty of dealing with the situation as applicable to individual companies rather than with the companies in the transfer of gas system as a whole. The Consolidated Company is the parent company, owning and

controlling the others, and using its own construction department for major construction work of all the companies. It also contracts in the first instance for the stock of coal and oil required by all companies and, to a very considerable extent, for pipe, specials, and other large supply items. This method I think results in economies for all the companies, but to some extent it tends to encourage the carrying of a larger total amount of working capital than would otherwise be needed for the plaintiff's own gas business alone. Although each company pays its own bills, directly to the purveyor, for coal, oil and pipe for main construction (the three largest items of outlay), the Consolidated Gas Company does carry on hand stocks of certain materials which are subject to use for the aid of affiliated companies (e. g., pipe and specials for repair work done for the Standard and New Amsterdam Companies). As soon as any of these materials are used in the doing of work for any of the affiliated companies, the cost of such work, including labor and materials, is immediately billed to such company and thereupon appears in the "Accounts Receivable" of the Consolidated Gas Company.

In presenting its proofs as to the amount of working [fol. 142] capital required for the plaintiff's own gas business, the plaintiff's witnesses properly eliminated all "accounts receivable" and "suspense" items due from affiliated companies. On the other hand, the plaintiff's own manufacturing plants produce only about two-fifths of the gas sold, the other three-fifths being purchased; hence the amount of gas sold standing alone would not be a proper basis to be used in estimating the amount of working capital. Again, the Astoria Company, which makes gas and sells practically its entire product to the other companies in the system, requires large stocks of gas making materials, but no main and service supplies, and, as it sells substantially all its production to the other companies, has no uncollectible gas bills, such as the distributing companies have. The larger amount of gas making materials kept on hand by the Astoria Company also tends to reduce the necessity of the other system companies keeping the same in their stocks.

In the case of the Astoria Company, I think the amount allowed as working capital can be fairly apportioned be-

tween it and the other companies for whom it manufactures gas in the proportions that its manufacturing facilities are used for such companies, but this method is not applicable to the plaintiff company. Mr. Brundage, plaintiff's secretary at the time of the hearings, testified that the working capital needed by the Consolidated Company in 1923 was $7,200,000, and by the Astoria Company $3,280,000. Colonel Miller, one of the plaintiff's expert witnesses, testified that the Consolidated Company needed $6,900,000 and the Astoria Company $3,400,000. Mr. Brundage's figures were based on what he testified was the average neces- [fol. 143] sary cash from the standpoint of operating expenses, the quantities of materials required to be kept on hand for the plaintiff's gas business, the advances represented by the average balances due from sundry debtors, the necessity of maintaining credit, the necessity of discounting bills, and similar factors which enter into business judgment and actual necessities as to working capital. A similar method was pursued as to the Astoria Company. Colonel Miller's method, on the other hand, was based on assuming the requirement of forty cents per thousand cubic feet of gas made and sold by the plaintiff, and twenty cents per thousand cubic feet on the portion of the gas sold which was purchased from other companies. For the Astoria Company he based it on the unit of twenty cents per thousand cubic feet of gas sold. Either method produces substantially the same result.

The defendant Attorney General claims that for the Consolidated Company the allowance for working capital should be $4,811,538.80, which is arrived at on the basis of twenty cents per thousand cubic feet of gas sold, and which he thinks sufficient to include the necessities of the Astoria Company. In reference to the Astoria Company, in the Joint Facilities Report, Mr. Woods assumes the amount necessary for that company at $3,319,000 for the year 1922; $3,941,128.45 for the year 1923, of which $2,898,799.17 for 1922, and $3,155,835.71 for the year 1923 was devoted to the service of the Consolidated Company. [In view of the increased demands made on the Astoria Company and the increased sales of the Consolidated Company, I think an allowance of $3,500,000 for the Consolidated Company and [fol. 144] $3,000,000 for the Astoria Company (of which

$2,400,000 is used for the benefit of the Consolidated Company), or $6,500,000 in all, is a fair and reasonable amount, and I so find.]

Going Value

In the consideration of this subject, great care should be taken to distinguish between "going value" as I think is intended in the cases which say the value should be included in determining the value of the property of a public utility in considering the question of a fair return, and other elements which many writers, both lawyers, economists and judges, have loosely included therein. In reviewing what has been written on the subject it is apparent that there have often been grouped under this head items more properly termed "undistributed structural costs" and "pioneer losses." I find no authority in the decisions of the Supreme Court for the inclusion of these first items under this head nor for the inclusion of the latter class at all. (Georgia Railway and Power Company v. Railroad Commisison of Georgia, supra.)

It seems to me that "going value" is something entirely different and apart from such expenditures. It is not easily expressed in exact language, and its measure and amount must differ in individual cases. I think the statement of Judge Miller in the Kings County Lighting Company case (210 New York, 479, 486) comes very close to being an accurate definition of the term, and the elements entering into. He there said:

"It takes time to put a new enterprise of any magnitude on its feet after the construction work has been finished. Mistakes of construction have to be corrected, [fol. 145] substitutions have to be made, economies have to be studied, experiments have to be made which sometimes turn out to be useless, an organization has to be perfected, business has to be solicited and advertised for—in the case of a gas company gratuitous work has to be done, such as selling appliances at less than a fair profit, and demonstrating devices to induce consumption of gas, and to educate the public up to the maximum point of consumption. None of these things is reflected in the value of the physical property unless, of course, exchange value be

taken, which is not admissible in a rate case. A company starts out with the 'bare bones' of the plant, to borrow Mr. Justice Lurton's phrase in the Omaha Water Works case, supra. By an expenditure of time, labor and money, it co-ordinates those bones into an efficient working organism and acquires a paying business. The proper and reasonable cost of doing that, whether included in operating expenses or not, is as much a part of the investment of the company as the cost of the physical property."

In the instant case, witnesses have testified to a going value of from $19,000,000 to $27,000,000. These witnesses were men of long connection and great experience in the gas business. They have given their reasons for their opinion and the method in which they arrived at their conclusions as to such value. Weight must be attached to their opinions. But in this case there are features which I think create a difference between the basis for their testimony and the facts as they actually exist here. They and others base their opinion on the construction of a new enterprise, and the development of its business from its inception into a paying concern. In this case, the present [fol. 146] plaintiff took over the established business and properties of certain gas companies in the City of New York, some of which had been incorporated and in operation at the time of the consolidation for a period of over fifty years. A great deal of the work, labor and outlay incident to the inception of the other companies had been already performed. They had installed over 100,000 meters and were selling in the neighborhood of 4,000,000,000 cubic feet of gas a year. They were doing business, and this present plaintiff has continued to do business in a thickly settled community, the chief city of this country.

When the consolidation was effected in 1884, these companies were taken over at a value fixed on them which was approved by the Legislature of this State. It is fair to assume that at that time all the elements which properly went into that valuation were given consideration, and among these must have been the value of this element constituting what we now call "going value." The Consolidated Gas Company had the benefit of their early efforts, and continued them, and has increased the sales from 4,000,000,000 to 24,000,000,000 cubic feet of gas per year.

It has had the control, if not a monopoly, of the gas business in its territory for a number of years, through its ownership of companies otherwise competitors. There was a time when the electric light business threatened its supremacy, and for a time its business fell off materially. However, it secured control of these companies also, and then the increase of the use of gas for domestic and commercial purposes gradually replaced its loss as a lighting medium. In a city such as this, while of course it is necessary and proper that efforts should be made, as they have [fol. 147] been, to increase the sales of gas, it is also true that a very considerable portion of its new business comes to it without cost or solicitation. Its position is unique and differs materially from that of a company seeking to establish a new business in a small and less populated community where the uses and advantages of gas have not been known and the people must be educated to its use. For these reasons I think that many of the facts, figures and arguments advanced have no application to the present situation.

The investment in the properties used by the plaintiff in its gas business on December 31, 1923, approximates $90,000,000. Although no definite percentage has been laid down as representing the measure of the "going value" of a public utility company, examination of the cases has shown that courts have generally found an amount approximating 10 per cent of the sum found as the value of the tangible property, as fairly representing the "going value" (Mobile Gas Company v. Patterson, 203 Fed. 219; Streator Aqueduct Company v. Smith, 295 Fed. 385). In some of these instances the sum found as the value of the tangible property has been approximately the investment; in other instances a larger sum determined as the fair value; but the percentage of relationship has generally been about what I have stated. In determining the question of the confiscatory character of the statutory rate, values should be conservative rather than otherwise, in order that the courts may see whether by any fair method such rates can be sustained. I think, therefore, that for the purpose of this suit an allowance of $9,000,000 for "going value" is reasonable, especially in view of the fact that in all probability some of the elements of "going value" were in- [fol. 148] cluded in the amount allowed in its investment

on consolidation. I have eliminated them from consideration, as already stated, in reaching this sum.

In fact, if this were an original question, I might hesitate to rest a decision as to the unconstitutionality of the statute fixing rates because confiscatory, on the inclusion of either going value or the valuation of "franchises and rights." As to the latter item, it ordinarily would not be included in a rate litigation (Georgia Railway and Power Company v. Railway Commission of Georgia, 260 U. S. 625; Cedar Rapids Gas Company v. Cedar Rapids, 223 U. S. 655, 699; Des Moines Gas Company v. Des Moines, 238 U. S. 153, 169; Galveston Electric Company v. Galveston, 258 U. S. 238), and is only included in the instant case for the reason that as to this particular company the Supreme Court of the United States has allowed them, as it states, "for special reasons" (Willcox v. Consolidated Gas Company, 212 U. S. 19, 43, 44; Newton v. Same, 258 U. S. 265; Georgia Railway and Power Company v. Railway Commission, supra), which virtually make the allowance of $7,781,000 for "franchises and rights" unique and sui generis as to this company.

The element of going value, however, where definitely and sufficiently proved, seems clearly to be a part of the rate base under Des Moines Gas Company v. Des Moines, supra; Denver Union Water case (246 U. S. 178); Southwestern Bell Telephone Co. v. City of Fort Smith, 294 Fed. 102, and Venner v. Urbana Water Co., 174 Fed. 348, even although in the end the amount thereof is not a matter of exact mathematical calculation but of judgment. In this case, the evidence shows that a business has been created, successfully in operation, with the manufacturing plants [fol. 149] organized and operating in a modern, efficient, economical manner, with a personnel coordinated and of long experience; that considerable amounts have been and are being expended annually in advertising the advantages of the use of gas and gas appliances, in the instruction of consumers in their use, in devising new methods of applying its use to domestic and commercial purposes, and in bringing such methods to the attention of present and prospective customers, in canvassing and soliciting business, in making tests and experimentation of new devices and in other ways doing many and various things to attract new customers and extend the demands of old ones. It is true that the

company has, to a certain extent, been reimbursed for its expenditures in extending its business, but that has been held no reason for not considering them as elements in "going value" (Lincoln Gas Company v. Lincoln, 250 U. S. 256, 267; City of Minneapolis v. Rand, 285 Fed. 819, 830; Kings County Lighting Company case, 210 N. Y. 479, 486).

I think a clear distinction is shown here between them and elements such as past losses, good will, development, or undistributed structural expenses. Elements of going value are certainly above and beyond those mentioned, and do exist in the present case.

I am now able to proceed to find the amount of the investment in the property of the plaintiff and in that portion of the property of other companies used by it for the benefit of its consumers. I find the investment cost of the portion of the tangible property of the Consolidated Gas Company used by it in its gas business as of December 31, 1922, was the sum of $49,225,798.32; franchises and rights $7,781,000; working capital $3,500,000; going value $9,000,000; total $69,506,798.32.

[fol. 150] The original cost of the Astoria Light, Heat & Power Company's property used and useful in the gas business as of December 31, 1922, as shown by its books of account, exclusive of working capital, was at least the sum of $25,769,744.29. Of the above amount mentioned the portion devoted to the plaintiff in its gas business amounted to the sum of $22,507,174.83; working capital $2,550,000, portion devoted to the plaintiff's gas business was $2,227,158.14; total $24,734,332.97.

The investment of the Standard Gas Light Company in the jointly used property, as of December 31, 1922, amounted to the sum of $451,673.26, of which the portion used by the plaintiff amounted to the sum of $180,409.02.

The investment in the jointly used property of The East River Gas Company of Long Island City amounted to the sum of $6,723,687.64, of which the portion used by the plaintiff amounted to the sum of $4,139,587.09.

This makes the total investment in the property of the plaintiff and that of the other property used by it as of December 31, 1922, as follows:

Property of Consolidated Gas Company	$69,506,798 32
Property of The Astoria Light, Heat & Power Company	24,734,332 97
Property of The Standard Gas Light Company	180,409 02
Property of The East River Gas Company of Long Island City	4,139,587 09
Total	$98,561,127 40

I find that the cost of the portion of the property of the Consolidated Gas Company used by it in its gas business as of June 1, 1923, was the sum of $51,297,363.44; franchises and rights $7,781,000; working capital $3,500,000; going [fol. 151] value $9,000,000; total $71,578,363.44.

The original cost to the Astoria Light, Heat & Power Company of its property used and useful in its gas business as of June 1, 1923, as shown by its books of account, exclusive of working capital, was at least the sum of $26,136,953.16; working capital, $3,000,000; total $29,136,953.16. Of the above mentioned amount, the portion devoted to the plaintiff in its gas business amounted to the sum of $23,331,245.86.

The investment of The Standard Gas Light Company in the jointly used property, as of June 1, 1923, amounted to the sum of $473,750.04, of which on the basis of the Woods Report, the proportion used by the plaintiff, amounted to the sum of $187,155.99.

The investment in the jointly used property of the East River Gas Company of Long Island City amounted, as of June 1, 1923, to the sum of $6,723,319.52, of which the portion used by the plaintiff amounted to $3,795,038.34.

This makes the total investment in the useful property owned by the plaintiff and in the property of other companies used by it, as of June 1, 1923, as follows:

Property of the Consolidated Gas Company	$71,578,363 14
Property of The Astoria Light, Heat & Power Company	23,331,245 86
Property of The Standard Gas Light Company	187,155 99
Property of The East River Gas Company of Long Island City	3,795,038 34
Total	$98,891,803 63

During the period from June 1, 1923, to December 31, 1923, the books of account in evidence show that the plaintiff expended for additions, extensions and improvements in and to its gas properties (including $500,000 of its investment in the Hunts Point property) the sum of $2,532,895.35, and during the same period it made retirements amounting at the original cost of such property (including the 14th and 42nd Street stations) to $2,843,496.84, making a net decrease from the original cost of the plaintiff's gas [fol. 152] property during this period of $310,601.49.

During the same period, viz., from June 1st to December 31, 1923, the Astoria Light, Heat & Power Company expended for additions, extensions and improvements the sum of $708,526.91, and made retirements during said period amounting to $29,558.55, making net additions applicable to the investment of the company during that period of $678,968.36, of which the proportion devoted to the requirements of the plaintiff in the service of its consumers amounted to the sum of $336,768.50. During this period there were no additions or retirements to the jointly used properties of the Standard or East River gas companies.

This makes the investment as of December 31, 1923, the sum of $98,917,970.64, made up as follows:

Original cost of the property used in plaintiff's gas business as of June 1, 1923	$98,891,803 63
Net decrease in such property and investment June 1, 1923, to December 31, 1923	310,601 49
Total of property used in the plaintiff's gas business as of December 31, 1923	$98,581,202 14
Net additions to December 31, 1923, in the property of The Astoria Light, Heat & Power Co. used in the plaintiff's gas business	336,768 50
Total investment as of December 31, 1923, in property used in the plaintiff's gas business	$98,917,970 64

Reproduction Cost

In reference to the reproduction cost of plaintiff's property and that of the other companies used by it in the service of its consumers, it must be borne in mind that the defendants offered no testimony on this subject, resting on [fol. 153] the legal contention that it furnished no evidence of value, and that the proper basis was the investment cost alone. There was some attempt on cross examination to show that the figures given were not entirely correct, but no witnesses were produced to contradict the plaintiff's evidence. This does not, however, apply to the value ascribed to the land nor the Astoria Tunnel as to which, as before stated, they did present witnesses. If all the evidence produced by the defendant Attorney General as to the land was accepted at its face value, it would make but a very slight difference in the amount of reproduction cost as testified to by the plaintiff's witnesses.

The defendants do ask that from what has been done or said in other cases different conclusions be drawn or less amounts found than testified to by the plaintiff; but except as to the Astoria tunnel, no legal evidence has been presented, in behalf of the Attorney-General or by the Public Service Commission, which might be weighed against that presented in behalf of the plaintiff company.

Presumptively, the Commission and the Attorney-General have performed their sworn duty as public officers. Actually, I have no reason to believe that they have done less, with respect to the preparation and presentation of proofs in this case. I have no reason to believe that either the Commission or the Attorney-General refrained from presenting any testimony in fact available to demonstrate that any of the plaintiff's figures were excessive, assuming the correctness of the controverted legal principles on which the plaintiff's proofs were based.

The plaintiff has presented the sworn testimony of Mr. Burt, head of the Northeastern Construction Company, as to the cost of replacing the structures used by the plain- [fol. 154] tiff for the benefit of its consumers in the condition in which they were when new, and also an estimate of the amount which would be required to put the present structures in that condition. Colonel Miller, a gentleman

of long experience in the construction and operation of gas properties, has presented an inventory of the equipment and machinery, and given an estimate of its present reproduction cost, together with the amount necessary to put the same in condition as if new. Mr. Simpson, who has been the engineer in charge of mains and services for many years, has testified as to his opinion of the cost of reproducing the present mains and services, or such portion of them as plaintiff uses, and as to their condition. The value of land has been testified to by various witnesses. Other property has been set forth at its book value. Testimony was also presented by Colonel Miller as to the undistributed structural costs claimed by the plaintiff to be necessarily a part of the reproduction of the property used by it in the gas business.

The opinions of these witnesses, coming as they do from men of long experience in their respective lines, are entitled to great weight, but are not necessarily conclusive, any more than opinion evidence on any other subject. It must be taken and considered in the light of all the facts in the case, the past experience of the company, the evidence as to present prices, and the difference in cost between what might might be called the pre-war period and the present period, and all the other facts and circumstances in the case which tend to bear on the determination of these costs by the Special Master.

After giving due consideration to all these factors I have reached the conclusion that it would cost to reproduce the manufacturing plant, distributing system and [fol. 155] and other tangible property owned by the plaintiff and used and useful in its gas business as of December 31, 1922, inclusive of certain property owned by the plaintiff but used jointly with other companies, exclusive of working capital and going value and without any deduction for so-called depreciation, but after deducting the sum hereinafter stated in order to place the property in condition as if new, at least the sum of $113,282,044.64. Deducting therefrom the portion thereof used by other companies, the reproduction cost of which was the sum of $5,171,911.58, makes the reproduction cost of the tangible property owned by the plaintiff and used by it in its gas business at least the sum of $108,110,133.06.

As to The Astoria Light, Heat & Power Company I find the reproduction cost of its property, as of December 31, 1922, to have been as least the sum of $29,762,268.36, made up as follows:

Reproduction cost of property used by plaintiff	$22,352,668 24
Less percentage of amount necessary to put property in condition when new	510,879 98
Making	$21,841,788 26
Undistributed structrual costs	5,520,380 10
Working capital	2,400,000 00
Total reproduction cost, at least	$29,762,268 36

As to The East River Gas Company of Long Island City, I find that the reproduction cost of its property used by the plaintiff as of December 31, 1922, was at least $8,993,261.76, made up as follows:

Astoria Tunnel	$5,540,488 09
Ravenswood Tunnel	738,674 62
48 and 60-inch Mains in Long Island City and Astoria	653,663 19
Undistributed structural costs	2,060,435 86
Total, at least	$8,993,261 76

[fol. 156] As to The Standard Gas Light Company, I find that the reproduction cost of the portion of its property used by plaintiff as of December 31, 1922, was as least $345,087 55, made up as follows:

48-inch Harlem River main	$207,718 42
62nd Street boiler and governor house	60,502 83
Undistributed structural costs	76,866 30
Total, at least	$345,087.55

This makes the total reproduction cost of the property of the plaintiff and of the portion of the jointly used property used by the complainant in its gas business as of De-

cember 31, 1922, including working capital and going value, at least the sum of $159,710,750.73, made up as follows:

Property of Consolidated Gas Company	$108,110,133 06
Working capital of Consolidated Gas Company	3,500,000 00
Going Value of Consolidated Gas Company	9,000,000 00
Total	$120,610,133 06
Property of Astoria Light, Heat & Power Company	29,762,268 36
Property of East River Gas Light Company of Long Island City	8,993,261 76
Property of the Standard Gas Light Company	345,087 55
Total reproduction cost of the property used by the plaintiff as of December 31, 1922, at least	$159,710,750 73

I have reached the conclusion that it would cost to reproduce the manufacturing plant, distributing system and other tangible property owned by the plaintiff and used and useful in its gas business as of June 1, 1923, inclusive of certain property owned by the plaintiff and used jointly with other companies, exclusive of working capital or going value, without any deduction for so-called depreciation but after deducting the sums hereinafter stated in order to place the property in condition as if new, at least the sum of $113,642,391.54.

Certain of this property, however, was used by other [fol. 157] companies, including the 48-inch connecting main in Manhattan and the Bronx, the 48-inch transfer main and the 36-inch distributing mains in the Bronx and the Kingsbridge holder station and certain small mains in the Bronx, and the cost to reproduce such portion as of June 1st was the sum of $3,243,676.43. This makes the reproduction cost of the tangible property owned by the plaintiff and used by it in its gas business at least the sum of $110,398,715.11.

I have found the cost to reproduce the portion of the manufacturing plant, distributing system and other tangi-

ble property owned by the Astoria Light, Heat & Power Company but used by and useful to the plaintiff in its gas business as of June 1, 1923, inclusive of working capital, to be at least the sum of $31,041,333.66. This is without any deductions for so-called depreciation but after deducting the percentage of the amount necessary to put the property of such company in condition as when new. This amount is made up as follows:

Reproduction cost of property	$23,265,043 05
Less percentage of amount necessary to put buildings and plant in condition as when new	468,392 19
Making	$22,796,650 86
Undistributed structural costs	5,844,682 80
Working capital	2,400,000 00
Total, at least	$31,041,333 66

I have also found the reproduction cost of the portion of the property of The East River Gas Company of Long Island City used by the plaintiff as of June 1, 1923, to be at least the sum of $8,266,253 52, made up as follows:

Astoria Tunnel	$5,086,537 80
Ravenswood Tunnel	678,127 61
48 and 60-inch mains in Long Island City and Astoria	600,846 31
Undistributed structural costs	1,900,741 80
Total, at least	$8,266,253 52

[fol. 158] I have also found the reproduction cost of that portion of the jointly used property of the Standard Gas Light Company used by the plaintiff as of June 1, 1923, to be at least the following sum:

48-inch Harlem River main	$190,692 32
62nd Street boiler and governor house	85,146 37
Undistributed structural costs	77,551 50
Total reproduction cost of property of Standard Gas Light Company used by the plaintiff, at least	$353,390 19

This makes the total reproduction cost of the property of the plaintiff and of the portion of jointly used property used by the plaintiff in its gas business as of June 1, 1923, including working capital and going value, at least the following amounts:

Property of Consolidated Gas Co.	$122,898,715 11
Property of Astoria Light, Heat & Power Co.	31,041,333 66
Property of The Standard Gas Light Co.	353,390 19
Property of The East River Gas Company of Long Island City	8,266,253 52
Total reproduction cost of property used by the plaintiff in its gas business as of June 1, 1923, at least the sum	$162,559,692 48

During the period from June 1, 1923, to December 31, 1923, the plaintiff made additions, extensions and improvements to its properties which should be added to the reproduction cost thereof as of June 1, 1923, such capital additions, amounting to $2,137,906.17. The withdrawals during the same period, including the 14th and 42nd Street station at unit prices as of June 1, 1923, amounted to $9,712,031.53, making a net decrease during this period, applicable to the reproduction cost of the plaintiff's used and useful property of $7,574,125.36.

Taking into consideration these changes, the reproduction cost of the property owned by the plaintiff and used in [fol. 159] its gas business as of December 31, 1923, was and is at least the sum of $115,324,589.75. During the same period The Astoria Light, Heat & Power Company made certain net additions to its property devoted to the use of the plaintiff amounting to the sum of $80,066.73, making the value of the property of that company used by the plaintiff in its gas business as of December 31, 1923, at least the sum of $31,121,400.39.

This makes the reproduction cost of the property used by the plaintiff in its gas business, including working capital and going value, at least the following sums, as of December 31, 1923:

Property of Consolidated Gas Company	$115,324,589 75
Astoria Light, Heat & Power Co.	31,121,400 39
Standard Gas Light Company	353,390 19
East River Gas Company of Long Island City	8,266,253 52
Total, at least	$155,065,633 85

In connection with this finding of reproduction costs, aside from certain reductions in the estimated cost of the manufacturing plants and holder stations, the principal difference will be found in the value of street mains, services, and undistributed structural costs. The street mains Mr. Simpson appraised at the sum of $37,075,233, and the services at $5,557,284. The former had cost the plaintiff $13,531,095.10 and the latter, $1,971,101.26. It will be observed therefore that Mr. Simpson's appraisal gives a June 1, 1923, reproduction cost of mains of nearly three times the company's investment therein, and of the services of about two and one-half times. It is true, undoubtedly, that to reproduce the mains and services under conditions as they exist today in the Borough of Manhattan would cost a very considerable amount in excess of the cost of their original installation, but that it would be so [fol. 160] great an increase as above stated, does not accord with my opinion of the general increases of costs of labor and material nor with my judgment on the facts in relation thereto as presented in the testimony. While the generally accepted increase over pre-war prices of labor and materials is some 60 per cent it is true that in the case of mains particularly the great increase of underground structures in the Borough of Manhattan in the last fifteen or twenty years has added considerably to the cost of installation.

It seems to me, however, that if we accord substantially 100 per cent increase over the original cost these difficulties as well as the increased cost of labor and material are taken into consideration. I have great respect for Mr. Simpson's knowledge and the detail with which he has worked out his estimates, but after all it is an estimate based on what he calls average conditions encountered in the Borough of Manhattan, and it seems to me that he has overestimated the cost of meeting such conditions or has

taken a condition as an average one which is more costly than what the cost would be based on the actual construction of the mains themselves.

For the same reasons substantially I have reduced the estimate as to the replacement cost of the services. I have included in my estimate of the reproduction cost an amount for undistributed structural costs, which it seems to be generally conceded necessarily accompany any undertaking of size such as this would be, but at an amount different from that testified to. I have computed this amount on a basis which is approximately the amount allowed by the Public Service Commission in this state and [fol. 161] by other public utility bodies, and which I think should fairly cover the cost of such items.

Present Value

Having reached a conclusion as to the investment in and the reproduction cost of the property of the plaintiff and of the portion of the jointly used property of other companies used by the plaintiff in its gas business for the benefit of his consumers, I have taken up the question of the present value of such properties. Under the rule laid down by the United States Supreme Court in its latest decisions on the subject, as I understand them, preponderating weight is to be given to the reproduction costs, but no decision that I have found states that that is to be the sole basis for the finding of present value. Nor do I find any decision upholding the contention of the defendants that the original or investment cost is to be the sole basis for determining the present value.

As I have before stated, the difficulty lies in the fact that the Supreme Court has laid down no definite rule as to how much or exactly what weight is to be given to either of these factors. The question of return can only affect the result if it were not to be varied in accordance with the facts as found by the Commission or courts, and the value of its stocks and bonds as heretofore stated, at least in this particular case, can have no weight owing to the ownership by the plaintiff of and the receipt of return from both gas and electric business. Therefore, not all of the elements laid down in Smythe v. Ames can be applied to the present case.

[fol. 162] There are, however, certain facts and considerations that are of weight in determining this question. The investment of the plaintiff in the properties used by it in its gas business, inclusive of franchises, working capital and going value as of December 31, 1922, was at least the sum of $98,561,127.40; as of June 1, 1923, was at least the sum of $98,891,803.63, and as of December 31, 1923, at least the sum of $98,917,970.64. Its reproduction cost on December 31, 1922, was at least the sum of $159,710,750.73; on June 1, 1923, was at least the sum of $162,559,692.48, and on December 31, 1923, was at least $155,065,633.85.

In the gas rate litigation of 1919-20, Judge Hand found an investment value at that time (1918) of at least $64,196,533, exclusive of "franchises and rights" and going value, and with a working capital of only $2,000,000 (although he stated that defendants' witnesses had said that twenty cents a thousand cubic feet was the minimum amount which should be allowed for it, which would have given $3,800,000 as the proper working capital at that time on such basis). He stated this investment finding of at least $64,196,533 was "certainly too small," that it was "more than probable that plaintiff's whole investment at present prices was valued at $115,000,000", twice what he valued it at. This figure was arrived at after excluding practically everything defendants objected to, and cutting all values to the lowest possible figure, as he stated.

Since the presentation of proofs in that case, the present investment in the various properties valued by Judge Hand, adding other properties now used by plaintiff in its gas business, has increased from $64,196,533 to a least $78,273,[fol. 163] 856.52 as of December 31, 1923, exclusive of working capital in excess of $2,000,000, and exclusive of going value and franchises. If the then present value of the properties included by Judge Hand in 1918 was $115,000,000 at that time and $14,000,000 has been added to it since then, it would make a present value of at least $129,000,000 plus the additional working capital I have found now necessary, and plus "franchises and rights" and going value. Adding the working capital and franchises would make a value, exclusive of going value, of at least $140,281,000 at present prices, or, with going value included, of at least $149,281,000.

Again, Judge Hand in finding that his computation produced a capitalization of only $3.36 per thousand cubic feet, or $3.63 with franchises, stated that it was too small, and that defendants' experts had sworn that at that time the cost of a water-gas plant would be $5.60 per thousand cubic feet, and that coal-gas plants would cost more. Colonel Miller in the present case swore that the cost of a coal-gas plant would be twice that of a water-gas plant. It thus appears that Judge Hand practically conceded that he had valued the plants at only a little over one-half a figure which he would have been justified by the testimony in the case in finding as its then value.

We thus have various amounts presented under various conditions as representing the conflicting views of the plaintiff and defendants, the plaintiff contending for the full current reproduction cost with the engineering estimates of the undistributed structural costs and various proofs as to working capital and going value, which amounts to $216,-[fol. 164] 153,025.31 as of June 1, 1923, and to $209,711,-006.51 as of December 31, 1923, and the investment, which the defendant Attorney General claims is the sum of $94,-366,337.13 or, including franchise value of $7,781,000, the sum of $102,147,337.13. The defendants also claim that no going value should be included, but if this be given the value assigned by the Special Master it would bring the investment on the defendant Attorney General's basis to the sum of $111,147,337.13.

It was stated by Mr. Justice Peckham in Willcox v. Consolidated Gas Company (212 U. S. 19, 52) that present value was the basis on which the company was entitled to a return. He there stated "If property which legally enters into the consideration of the question of rates has increased in value since it was acquired the company is entitled to the benefit of such increase. This is at any rate the general rule. We do not say there possibly may not be an exception to it, where the property may have increased so enormously in value as to render a rate permitting a reasonable return upon such increased value unjust to the public."

On the other hand, it has never been held that the protection of the constitutional guaranty was limited to the amount originally invested in property devoted to the public service; on the contrary, the Supreme Court has repeat-

edly declared that the protection extends to the value of the property at the time of the alleged confiscation.

Bearing in mind these various claims and controverted questions and applying to the evidence various well accepted theories as to the difference between former and present costs, I have arrived at an estimate of the present value of the property as of June 1, 1923, as at least the following sums:

[fol. 165] Consolidated Gas Company

Land	$13,460,000.00
Buildings	8,000,000.00
Manufacturing plants and holder stations	16,000,000.00
Mains	27,000,000.00
Services	3,000,000.00
Meters and gas appliances	11,500,000.00
General equipment	831,523.00
Tools and implements	202,363.00
Laboratory equipment	23,905.00
Working capital	3,500,000.00
Franchises	7,781,000.00
Undistributed structural costs as shown by books	2,248,319.61
Going value	9,000,000.00
Total, at least	$102,547,110.61
Less value of property used by other companies	3,243,676 43
Present value of the property, as of June 1, 1923, used in the plaintiff's gas business, at least	$99,303,434.18

Astoria Light, Heat & Power Company (Portion Used by Plaintiff)

Land	$3,277,297.44
Buildings	4,000,000.00
Manufacturing plant and holders	16,000,000.00
Concrete bulkhead	141,092.46
Furniture and fixtures	41,279.17
General equipment	43,883.99
Tools and implements	114,992.00
Working capital	2,400,000.00
Undistributed structual costs found on the books	2,408,332.00
Total, at least	$28,426,877.06

East River Gas Company (Portion Used by Plaintiff)

Astoria tunnel	$4,374,557.41
Head houses	74,406.42
Land	4,459.23
Mains and equipment	500,000.00
Total, at least	$4,953,423.06
Ravenswood tunnel	504,312.53
Land	29,541.86
Head houses	34,240.08
Equipment and mains	100,000.00
Total, at least	$668,004.47
48 and 60-inch mains	525,000.00
Total, at least	$6,146,427.53

Standard Gas Light Company (Portion of Property Used by Plaintiff)

48-inch Harlem River main	$150,000.00
62nd Street boiler and governor house	75,000.00
Total, at least	$225,000.00

[fol. 166] Making the total amount as of June 1, 1923, at least the following sums:

Consolidated Gas Company	$99,303,434.18
Astoria Light, Heat & Power Company	28,426,877.06
East River Gas Company of Long Island City	6,146,427.53
Standard Gas Light Company	225,000.00
Total, at least	$134,101,738.77

The additions and withdrawals between June 1, 1923, and December 31, 1923, would reduce this amount as of December 31, 1923, to $129,760,683.77, on at least which amount the plaintiff is entitled to receive a reasonable return over and above the actual and reasonable costs of production and distribution of the gas supplied by the plaintiff to its consumers.

In arriving at these figures I have taken into consideration the testimony as to the present condition of the property, its efficiency and operating results as well as fact that as to a certain portion of the property it has been added during the period of comparatively high prices, which do not differ much from the present level. As to the part representing the investment prior to December 31, 1915, I have added what seems to me to be the appreciation generally agreed on as having occurred between that date and this time. The result thus obtained in connection with the other facts and figures presented in the exhibits and evidence has checked to my satisfaction and amount stated above as being the present value.

Gas Unaccounted For

The item of "unaccounted for" gas represents their difference between the gas sent out from the plants and the [fol. 167] gas sold to consumers or used by the company itself. It is the lost gas due to a variety of causes, such as condensation in mains, leakages in main and service pipes, slow consumers' meters, variations in the temperature between the point of registration at the plant where made and at the meters on consumers' premises where it is measured for consumption. In 1922 the gas unaccounted for of the

plaintiff amounted to 6.42 per cent; in 1923, to 4.3 per cent. For the system it was 6.56 in 1922 and 4.64 in 1923. Natural causes contributed principally to the increase in 1922 over what had been the average loss of something over four per cent. This is a very low percentage. I think that with only one or two exceptions the lowest in any city in this country. The defendants do not dispute this amount, and I have therefore taken it at these figures in my computations of the cost of gas sold.

Cost of Operation

Testimony has been presented showing the claimed cost of operation of the various units at Astoria on the assumption that it was a manufacturing plant of the plaintiff; of the cost of the gas sold by the plaintiff, including the cost of gas made by its own plants on Manhattan Island, and the cost of gas purchased by it; and the cost of the gas manufactured and sold by the system as a whole for the years 1922 and 1923, and an estimate of the cost making such gas for the nominal year April 1, 1924, to April 1, 1925. No question is raised by the defendants as to the fact that the amounts claimed by the plaintiff were actually expended, nor that the materials and labor were actually used. The defendants urge, however, that the following [fol. 168] items of the plaintiff's operating expenses, for the year 1923, should be excluded (this schedule being a direct transcript from Page 159 of the Attorney General's brief):

(1923)

Account—Salaries, General Office: Salaries of General Officers and costs of maintaining Accounting Department, Transfer Department and Cashier's Department	$89,789.36
Account—Supplies and expenses, General Office:	
Preferred Stock Department	90,996.43
Same proportion of balance in account after deducting Preferred Stock Department which deduction account "Salaries General Office" bears to total of that account	37,146.15

Account—General Law Expenses: One-third.		16,559.70
Account—Miscellaneous General Expenses:		
One-third of meeting fees		6,196.60
Special Expenses included		21,003.94
Account—Gas Supply Inspection		100,101.06
Account—Expenses gas rate appeal No. 3		86,458.06
Account—Expenses re Public Service Hearings		113.56
Account—Insurance: Insurance on 14th and 42nd Street plants		4,300.00
Account—Taxes:		
Deduction on gross earnings tax due to basing it on dollar rate instead of rate collected in 1923		10,710.97
Excess dividends tax		48,805.41
Real Estate tax on property not used and useful 14th St. manufacturing plant	$59,581.30	
42nd St. manufacturing plant.	90,146.00	
Kingsbridge holder one-third.	1,826.66	
		151,553.96
Account—Use of Distributing System: Difference between amounts shown in Mr. Teele's Exhibit 816, $474,535.49 (including a return of 8 per cent) and maintenance of all tunnels and mains jointly used, $278,796.97.		195,738.52
Account—Uncollectible Bills		110,734.41
Account—Interest on Consumers' Deposits		94,032.42
Account—Interest on unpaid taxes		115,042.57
Total		$1,178,383.18
From this there should be deducted the interest on bank balances credited against the expenses by Mr. Teele		58,638.74
Net amount which defendants claim should be deducted		$1,119,744.54

I have assumed that the defendant made the same objection to the items under similar heads for the year 1922.

For the purposes of this inquiry, I have eliminated from [fol. 169] the plaintiff's actual operating expenses for the

years 1922 and 1923, the following items, which items I have disallowed solely for the purpose of testing the statute, and not as a finding of fact that the expenses in question were not reasonable and proper or that such items should be excluded in the fixation of a fair rate:

Items Deducted from Plaintiff's 1922 Operating Expenses

Gas supply inspection		$96,096 09
Interest on consumer's deposits		97,823 80
Rate case expenses		30,855 54
Expenses of P. S. C. hearings		43,491 65
Use of manufacturing capacity (representing return on investment)		2,049,833 70
Use of distributing system (representing return on investment)	$345,599 70	
Less revenue applicable to same	2,363 17	
		343,236 53
Renewals and replacements		176,378 81
Deduction of gross earnings tax to amount based on a dollar rate instead of rate collected in 1922		24,457 25
Excess dividends tax		28,368 23
One-third of real estate tax on Kingsbridge land		1,823 33
Real estate of corporations tax		334,965 00
Federal income tax		312,357 90
Interest on unpaid taxes		129,141 00
		$3,668,838 83

Items Deducted from Plaintiff's 1923 Operating Expenses

Gas supply inspection		$100,101 06
Interest on consumers' deposits		94,032 42
Rate case expenses		86,458 06
Expenses of P. S. C. hearings		113 56
Use of manufacturing capacity (representing return on investment)		1,903,264 70
Use of distributing system representing return on investment)	$318,575 55	
Less revenue applicable to same	2,257 84	
		316,317 71

Renewals and replacements	53,960 53
Deduction of gross earnings tax, basing it on $1.00 rate instead of rate collected in 1923..	12,856 63
Excess dividends tax	48,805 41
One-third of real estate tax on Kingsbridge land	1,826 66
Interest on unpaid taxes	115,042 57
	$2,732,779 31

[fol. 170] Although I have deducted the expenses of rate cases and of Public Service Commission hearings and other items mentioned, as seems proper on an inquiry of this kind and has been done in previous rate cases, I perhaps should say that these items should properly be included in fixing a rate by a body charged with that duty. In fact, it may be that I have been unduly exacting in deducting the cost of rate cases and public service hearings even on this inquiry. Judge Winslow indicated, in reviewing my report in the New York and Queens Gas Company case, that if the margin of confiscation in that case had been closer on the facts, he would not have hesitated to revise my report and restore this substantial item to operating expenses.

While it has been assumed generally that such expenses are not a regular or ordinary occurrence, the plaintiff's testimony showed that so far as the plaintiff is concerned such expenses have been almost continuous for the past five years and will continue for at least another year or two. In such time they have cost the plaintiff $730,114.29, and added .0071 cents per thousand cubic feet to the cost of operation, which in turn must be borne by the consumers. However, I have felt that this feature is one which might properly be left to the Court to be dealt with in the light of such experience.

I have decided to treat the cost of operation on the basis as if the used properties of the Astoria and other companies were owned by the plaintiff, and eliminate all intercompany charges, and taking the cost of making all gas sold by the company by consolidating the cost of production of all such gas with the cost of distribution and in that [fol. 171] way arriving at the total cost of production and

distribution of such gas. Under this method and with the elimination of the items above set forth as they appear for both years, I find that the total cost of the production of all the gas made and purchased by the plaintiff for the year 1922 was the sum of at least $11,275,662.90, or at least 51.09 cents per thousand cubic feet made. The unaccounted for gas being 6.42 per cent makes the cost of production of the gas sold at least 54.79 cents per thousand cubic feet. The elimination of the items of distribution I have set forth reduced the cost of distribution from $6,522,119.55 or 31.69 cents per thousand cubic feet to at least $6,253,852.47 or at least 30.39 cents per thousand cubic feet. The tax items, the interest on unpaid taxes and retirement expense omitted reduces these accounts to the extent of $1,007,591.52, making the total cost of production, distribution, etc., at least $20,121,452.47 or at least 97.77 cents per thousand cubic feet. I have also eliminated from the miscellaneous operating revenues interest on bank balances, which reduces this item from $1,964,104.77 to $1,916,924.48 or 9.31 cents per thousand cubic feet, and makes net operating expenses of at least $18,204,527.99, or at least 88.46 cents per thousand cubic feet.

The sales of gas for the year 1922 amounted to 20,580,285,600 cubic feet, but as 117,601,700 cubic feet were for lighting municipal buildings, for which the rate was 75 cents per thousand cubic feet, the total receipts, assuming the dollar rate for general consumers to have been in effect, would have been $20,550,885.17 or 99.86 cents per thousand cubic feet. This left a net income of not more than $2,346,357.18 or 11.40 cents per thousand cubic feet, on the basis of the quantity of gas actually furnished.

[fol. 172] On the basis of 650 B. t. u. gas as prescribed by Chapter 899 of the Laws of 1923, the cost of operation would have been increased at least $648,279.00 or 3.15 cents per thousand cubic feet and the net income decreased to not more than $1,698,078.18 or 8.25 cents per thousand cubic feet sold.

I find that the total cost of the production of all the gas made and purchased by the plaintiff for the year 1923 was at least the sum of $12,099,219.79 or at least 47.97 cents per thousand cubic feet made. The unaccounted-for gas being 4.31 per cent, the cost of production of the gas sold was at

least 50.29 cents per thousand cubic feet. The elimination of the items of distribution I have set forth reduces the cost of distribution from $6,921,709.56 or 28.77 cents per thousand cubic feet to not more than $6,641,004.46 or 27.61 cents per thousand cubic feet. The tax items, the interest on unpaid taxes and retirement expense omitted reduces these accounts $232,491.80, making the total cost of production, distribution, etc., at least $21,992,795.27 or at least 91.42 cents per thousand cubic feet. I have also eliminated from the miscellaneous operating revenues interest on bank balances, which reduces this item from $2,098,518.06 to $2,039,879.32 or 8.48 cents per thousand cubic feet, and makes net operating expenses of at least $19,952,915.95 or 82.94 cents per thousand cubic feet.

The sales of gas for the year 1923 amounted to 24,057,694,200 cubic feet, but as 130,388,700 cubic feet was for lighting municipal buildings, for which the rate was 75 cents per thousand cubic feet, the total receipts, assuming the dollar rate for general consumers to have been in effect, [fol. 173] would have been $24,025,097.03 or 99.96 cents per thousand cubic feet. This left a net income of not more than $4,072,181.08 or 16.92 cents per thousand cubic feet.

On the basis of 650 B. t. u. gas as prescribed by the statute, the cost of operation would have been increased at least $1,248,594.33 or 5.19 cents per thousand cubic feet, and the net income decreased to not more than $2,823,586.75 or 11.73 cents per thousand cubic feet sold.

I find that the total cost of production of all the gas made and purchased by the plaintiff for the year 1923 on the basis of prices of May, 1924, was at least the sum of $11,656,173.40 or at least 46.21 cents per thousand cubic feet made. The unaccounted for gas being 4.31 per cent, the cost of production of the gas sold was at least 48.45 cents per thousand cubic feet. The elimination of the distribution items I have set forth reduces the cost of distribution from $6,921,709.56 or 28.77 cents per thousand cubic feet to not more than $6,641,004.46 or 27.61 cents per thousand cubic feet. The tax items, the interest on unpaid taxes and retirement expense omitted reduced these accounts $232,491.80, making the total cost of production, distribution, etc., at least $21,549,748.88, or at least 89.58 cents per thousand cubic feet. I have also eliminated from the miscella-

neous operating revenues interest on bank balances, which reduces this item from $2,098,518.06 to $2,039,879.32 or 8.48 cents per thousand cubic feet, and makes net operating expenses of at least $19,509,869.56 or at least 81.10 cents per thousand cubic feet.

The sales of gas for the year 1923 amounted to 24,057,694,200 cubic feet, but as 130,388,700 cubic feet were for [fol. 174] lighting municipal buildings, for which the rate was 75 cents per thousand cubic feet, the total receipts, assuming the dollar rate for general consumers to have been in effect would have been $24,025,697.03 or 99.86 cents per thousand cubic feet. This left a net income of not more than $4,515,227.47 or not more than 18.76 cents per thousand cubic feet.

On the basis of 650 B. t. u. gas as prescribed by statute, the cost of operation as of May (1924) prices, would have been increased at least $1,207,696.25 or 5.02 cents per thousand cubic feet and the net income would have been decreased to not more than $3,307,531.22 or 13.74 cents per thousand cubic feet sold.

During the same period and on the same basis of prices and elimination it cost the Consolidated System Companies for the production and distribution of gas sold by them, and they had net income as follows:

Year	Operating costs, cents per M.	Net income	Income, cents per M.
1922	85 89	$4,716,593 84	13 96
1923	82 63	6,426,725 26	17 22
1923 (at present prices)	80 76	8,756,947 67	19 09

On the basis of supplying gas of not less than 650 B. t. u. as prescribed by the statute, the result would have been as follows:

1922	89 04	$3,652,121 87	10 81
1923	87 82	4,489,569 50	12 03
1923 (at present prices)	85 78	5,251,849 53	14 07

These facts are presented more for comparative purposes than for anything else, as I have not herein found specifically and individually as to the properties or operations of

[fol. 175] these companies, for the reason that the actions brought by these other companies on the transfer system are now under review before me and yet to be tried. The facts here found have a comparative bearing, however, upon the reasonableness or unreasonableness of the costs and operations of the plaintiff, as the results of the entire system approximate very closely the costs of the gas furnished by the plaintiff, and tend to confirm the reasonable-ess of the inter-company charges for the services rendered by the Consolidated Gas Company to affiliated companies and the charges for joint operation of certain properties and facilities. The presentation of the combined revenues and expenses for all of the companies on the transfer system tends also to negative any possible suggestion that any one company is favored, or that any other company is unduly burdened, so as to make the costs of any one company either too high or too low.

The soundness of considering the costs of the system companies, in connection with the operations of the plaintiff, is borne out by the action of the defendant Public Service Commission, which held that it was proper to treat the question of gas rates in this territory as if it were all served by one system or company, as is substantially the fact in practically everything but corporate entity. If rates were fixed with regard only to each company, it might require different rates for different companies and result in two rates being in force for companies operating in the same, or parts of the same territory.

The defendant Attorney-General takes the position that the cost of operation should be determined either by the cost of operation of the gas produced at coal gas house A and water gas house D of the Astoria plant, as was done [fol. 176] by Judge Hand, or by the weighted average cost of all gas produced at the four Astoria units. His expert, Mr. Little, presented an estimate of such costs for the nominal year April 1, 1924, to April 1, 1925. Upon cross examination it developed that Mr. Little was in error in a number of particulars in his estimate of the cost of making coal gas, and he frankly admitted that it would be necessary in any event to increase his estimated cost at each coal gas plant something over four cents per thousand cubic feet. His estimated cost of production at the water

gas plants had also to be increased somewhat for the same reason.

It seems to me that the contention of counsel for the Attorney-General that the corrected figures presented by Mr. Woods represented Mr. Woods' estimate of the cost for the same period is not quite in accord with the testimony. I understand that Mr. Woods only presented a correction of certain unit figures in Mr. Little's estimate relating to the cost of coking coal, and the sales price received at present for certain residuals and by-products. He did not therein undertake to pass on Mr. Little's estimate of the amounts of material or labor required. In relation to the Astoria coal gas plant there is one fact which largely accounts for the apparent difference in the cost between coal gas houses A and B, and which also goes to Mr. Little's estimate. It was testified, without contradiction, that the operating officials at Astoria have in many ways favored the A house at the expense of the B house, and while it would not make any difference when the entire production is considered, it does if there should be an attempt to select one as a standard by which the cost of coal gas is to be judged.

The A house has always had the best and specially se- [fol. 177] lected coal furnished it, while B house took the poorer grades, for the reason that the B house, by virtue of mechanical conditions, is able to obtain greater efficiency from the relatively inferior grades of coal than could be secured from the use of that coal in the A house. This diversion of the better grades of coal to the A house enabled the A house to get higher results at a lower apparent cost, because the coal it used produced more gas per ton, and also a greater amount of residuals and by-products for credit against the cost. While the actual cost of this selected coal was higher than the average cost, it was charged on the books against the A house only at the average cost, and the coal used by B house, much of which was of a quality inferior to that provided for A house, was also charged to it at the average cost. If these actual differences were reconciled, there would be little if any difference between the operations of the two houses; A house would be higher and B house would be lower.

Again, in considering whether the cost of gas should be based on the Astoria plant either singly or as a whole, other matters need to be taken account of. Mr. Little's estimate is based on the making of the entire supply of gas at Astoria. Against this hypothesis is his statement that the Manhattan plants could not and should not be abadoned, and that it would not be desirable or good judgment to have the entire production confined to Astoria, as in the event of any break in the transmission facilities under the river it would cut off the supply of gas to lower Manhattan. He also stated that if all the gas was manufactured at Astoria it would be proper to amortize the cost of abandoning the Manhattan plants, which would have to be added [fol. 178] to the cost of producing the gas. This, Mr. Woods esimated would add 18 cents to the cost of the gas. The testimony also was that the present transmission facilities would be inadequate to care for the amount of gas purposed to be made at Astoria, and such increased facilities would cost at least six million dollars, on which a return would have to be earned.

Again, the cost of gas in the holders at Astoria does not in fact represent the cost as against the reported cost of gas manufactured by the Manhattan plants. There is on Manhattan Island a number of large storage holders into which the gas from Astoria as well as the gas from the Manhattan plants is placed. While these holders and the buildings and apparatus connected with them are, as a matter of fact, used to a greater extent for the benefit of the gas made at Astoria than that made on Manhattan Island, these holder costs are not charged against the cost of production at Astoria at all, while the custom is to charge to the cost of production at the Manhattan plants this entire holder cost. In addition there should properly be added to the cost of making the gas at Astoria the cost of transmitting it to these storage holders. There is also a further cost which is carried in the cost of production at the Manhattan plants and which enters into the return on investment in the Astoria plants. That is, the Manhattan plants carry as an operating expense the bulkhead rentals paid the City of New York, while as the Astoria Company owns its water frontage at Astoria, these expenses become a matter of return on investment there.

The manufacturing plants at Astoria are of both coal and water gas, while the manufacturing plants on Manhattan Island are of water gas only.

[fol. 179] Evidence was given to show that the coal gas plants at Astoria were advantaged by having water gas plants at the same location, whereby, the residual coke from the coal gas plant could be used in the water gas plants, with a minimum loss, due to handling and low transportation cost.

In like manner, the water gas plants were advantaged by being able to receive coke from the coal gas plants in good condition for water gas production, and practically no cost for unloading and storing.

While the evidence showed that the combined coal and water gas production at Astoria was less than the water gas production in the Manhattan plants, it was also shown that the combined coal and water gas plants at Astoria reflected a greater investment per M. cubic feet of daily capacity than the investment cost in the water gas plants in Manhattan, and that when consideration was given to the additional cost of this increased investment in daily plant capacity, there was little or no difference in the production cost between Astoria and the Manhattan plants.

All of these matters should be properly taken into account and adjusted.

In view of the fact that when everything properly chargeable to the cost of manufacturing is taken into consideration there is but slight difference in the cost of production between the various manufacturing units of the company on Manhattan and at Astoria and that the proof is that the plants are operated efficiently and economically, and contain up-to-date machinery and equipment, and their working condition is of a high order, I see no reason for refusing to base the cost of operation on the cost of producing the entire amount of gas sold by the plaintiff no [fol. 180] matter where manufactured.

Again, assuming that the result claimed by Mr. Little could have been obtained by removing the plant for the manufacture of gas for the complainant entirely to Astoria and abandoning those on Manhattan, it is extremely questionable whether the company would not be permitted to in-

corporate these expenses in its rate base under the decision of the Supreme Court of the United States in the Pacific Gas & Electric Company v. San Francisco, 265 U. S. 403, 416. In that case the company had purchased an invention for $40,000. Its use enabled the company to abandon one of its plants and to produce gas at a less cost than previously. The contention was made that it could capitalize the invention only at the actual cost to the company and must base its return on the remaining portion of its plant taking into consideration the lowered cost of operation. In overruling this contention the Supreme Court said:

"The installation of the invention necessitated a new outlay of money and the abandonment of property theretofore valuable. Both were necessary in order that the cost to manufacture might be reduced. If appellant's permissible profits depend upon the lower cost and it is denied adequate return upon property that made the reduction possible or recompense for the obsolescence, successful efforts to improve the service will prove extremely disadvantageous to it."

They held that where a public utility furnishing gas for public use makes obsolete large portions of its equipment by the installation of new inventions which greatly reduce the [fol. 181] cost of production but cost the utility much less than the demonstrated value, a rate based upon decreased cost of production without allowing for obsolescence of discarded equipment or to the proved value of the invention takes property without due process of law.

Accrued Depreciation

As I have already stated, I have made no deduction from or in the amounts found by me for the reproduction cost of the property or its value for the purposes of this case, for any so-called "accrued depreciation," but I have deducted the amounts shown by the uncontroverted evidence to be required to be expended to put the properties used by the plaintiff in a condition equivalent to new. My reasons for these conclusions I have set forth in my opinion in New York & Queens Gas Co. v. Prendergast, et al. (1 Fed. Rep.,

2nd Series, 351, 365), which has been confirmed by Judge Winslow in the final decree entered by him in that case, as quoted in P. U. R. 1924 E, at page 59.

Return

The investment in or original cost of the property used and useful by the plaintiff in its gas business as of December 31, 1922, was at least the sum of $98,561,127.40 and the net operating revenue for 1922, as I have found it, of not more than $2,346,357.18, was therefore a return of not more than 2.38 per cent. on the investment in the property used by the plaintiff in its gas business as of December 31, 1922. The cost of reproduction of the property used by the plaintiff in its gas business as of December 31, 1922, [fol. 182] was at least the sum of $159,710,750.73. The net operating revenue for 1922, as I have hereinbefore found it after making the various deductions stated, gave therefore a return, on the reproduction cost as of December 31, 1922, of not more than 1.47 per cent. Both of these calculations are based on the quality of gas actually supplied during 1922.

The investment in or original cost of the property used by the plaintiff in its gas business as of June 1, 1923, was at least the sum of $98,891,803.63, and on December 31, 1923, at least the sum of $98,917,970.64. The net operating revenue for 1923, as I have hereinbefore found it after making the various deductions (viz., not more than $4,072,181.08) gave a return on the investment cost as of June 1, 1923, and as of December 31, 1923, of not more than 4.11 per cent. The reproduction cost of the property as of June 1, 1923, was at least the sum of $162,559,692.48, and on December 31, 1923, was at least the sum of $155,065,633.85. Such operating revenue gave a return on the reproduction cost as of June 1, 1923, of not more than 2.50 per cent. and as of December 31, 1923, of not more than 2.62 per cent.

The present value of the property used by the plaintiff in its gas business as of June 1, 1923, was at least $134,101,738.77, and as of December 31, 1923, was at least $129,760,683.77. The return yielded by the 1923 net earnings as I have found them, figured on the value of the property as of June 1, 1923, therefore would be not more than 3.03

per cent. and as of December 31, 1923, not more than 3.13 per cent.

The net operating revenue as I have found it on the basis of 1923 operations and 1924 (May) prices viz., the sum of not more than $4,515,227.47, would give a return on the in-
[fol. 183] vestment cost as of June 1, 1923, of not more than 4.56 per cent. and as of December 31, 1923, of not more than 4.56 per cent. Such net revenue would give a return on the reproduction cost as of June 1, 1923, of not more than 2.77 per cent. and as of December 31, 1923, of not more than 2.91 per cent. On the present value of the property used by the plaintiff as of June 1, 1923, such net income would give a return of not more than 3.37 per cent. and on the present value as of December 31, 1923, a return of not more than 3.48 per cent. All of the foregoing computations are based on the quality of gas actually supplied during 1923.

On the basis of furnishing 650 B. t. u. gas, the operating revenue for 1922 of not more than $1,698,078.18 would give a return on the investment cost as of December 31, 1922, of but 1.72 per cent., and on the reproduction cost of but 1.06 per cent. On such basis, the operating revenue for 1923 of not more than $2,823,586.75 would give a return on the investment cost as of June 1, 1923, of not more than 2.85 per cent., and on the investment cost of December 31, 1923, of not more than 2.85 per cent.; on the reproduction cost as of June 1, 1923, of not more than 1.73 per cent., and on the reproduction cost as of December 31, 1923, of not more than 1.82 per cent. On the same assumption as to compliance with the statutory requirement of 650 B. t. u. gas, the net income based on 1923 operations and 1924 (May) prices, viz., of not more than $3,307,531.22 would give a return on the investment as of June 1, 1923, and as of December 31, 1923, of not more than 3.34 per cent.; on the reproduction value as of June 1, 1923, of not more than 2.03 per cent.; on the reproduction value as of December 31, 1923, of not more than 2.13 per cent.; on the present value as of June 1, 1923, of not more than 2.46 per cent; as of December 31, 1923, of not more than 2.55 per cent.

[fol. 184] Presented in another form, the investment and return shows as follows:

		Interest at			Return 1922	
	Dec. 31, 1922	6%	7%	8%	On basis of gas furnished	On 650 B. t. u. basis
Investment cost	$98,561,127.40	$5,913,667.64	$6,893,278.92	$7,884,890.19	$2,346,357.18	$1,698,078.18
Reproduction cost	159,710,750.73	9,582,645.04	11,179,752.55	12,776,860.06		
	June 1, 1923				Return 1923	
Investment cost	$98,891,803.03	$5,933,508.22	$6,922,426.25	$7,911,344.29	$4,072,181.08	$2,823,586.75
Reproduction cost	162,559,692.48	9,753,581.55	11,379,178.47	13,004,775.40	at present prices	
Present value	134,101,738.77	8,046,104.33	9,387,121.72	10,728,139.10	4,515,227.47	3,307,531.22
	Dec. 31, 1923				Return 1923	
Investment cost	$98,917,970.64	$5,935,078.24	$6,924,257.94	$7,913,437.65	$4,072,181.08	$2,823,586.75
Reproduction cost	155,065,633.85	9,303,938.03	10,854,594.37	12,405,250.71	at present prices	
Present value	129,760,683.77	7,785,641.03	9,083,247.87	10,380,854.70	4,515,227.47	3,307,531.22

[fol. 185] From the preceding figures it will be seen that in neither year and under neither the past or present prices would the company have earned a return of even as much as 6 per cent on its investment or reproduction cost or present value, even on the quality of gas actually furnished for 1922 and 1923. If the 650 B. t. u. gas had been furnished, assuming it could have been done, the return would have been very considerably less. How much is also shown in the foregoing figures.

In the face of these results it is impossible to reach a conclusion that an actual test of the statute is necessary to establish its confiscatory character. To require the company to submit to further loss of return as would be necessary if actual test of the rate were to be required would be unfair to the company and impose an unnecessary hardship upon it. The decision does not rest upon such a narrow line between confiscation and non-confiscation as to bring it within the class of cases where such test has been required.

Furthermore, it should be borne in mind that one of these defendants, the Public Service Commission of the State of New York, charged with the duty of regulating rates, after a full investigation, within less than a year before the present rate was established by the legislature, had given the company a rate of approximately $1.15 per thousand cubic feet, saying at the same time that they did it not because they thought it was adequate, but in the hope that there might be reductions in operating costs which would justify it.

In making such rate, the Commission determined the amount of the investment in these gas properties as of June 30, 1922, and apparently used such investment figures as a [fol. 186] minimum, saying frankly that if present wages and prices were taken into account, present reproduction costs and present value would be very much more. So that we have the adjudication of the public body charged with the duty of regulating rates for such companies as complainant says, after a full investigation, that $1.15 would give an adequate return only on a "rate base" equivalent to the actual, unimpaired investment in the property used in the gas business, and that a $1.15 rate would do this only if the company were able to reduce operating ex-

penses in a substantial manner, which it did not and could not do. While of course this action of the Commission is not controlling on the Court, yet it is entitled to great weight in considering the necessity of a test period, and, taken together with the other facts in the case, would seem to render further test of the statute unnecessary.

Price Level

During and after the war there was for a considerable time a tendency to regard the prices then prevailing as temporary and abnormal. That was a defense urged by public authorities in resisting the demand for increased rates by public utility companies, and courts and masters showed an uncertainty and hesitation on the subject. This claim was still urged at the time of the previous trial of these rate cases although found against by the Master and the Court.

Over six years have now elapsed since the close of the war, and it may fairly be found, I think, that the present level of prices is and, for a long time to come will be, the normal one. It is the generally accepted fact, and it was so proven before me, that so far as wages are concerned—[fol. 187] and they make up one of the largest items in the cost of manufacturing and distributing gas—the level is higher than it was at the time of the previous trial, and shows no signs of decreasing. There have been some changes in the price of coal and oil, but these commodities fluctuate in accordance with varying conditions, being higher one year and lower another, but on a general level greatly above former years.

In the present trial the defendants have not urged this defense, and their expert in making his estimate for the future took substantially the figures shown by the company's books to have been incurred in 1923.

I see no reason to believe that there is anything abnormal in the prices during that year or that the future will bring any substantial reduction. If it does, there is always the right of the Public Service Commission to investigate and, on proper cause shown, to order the company to give the public the benefit of such reductions.

Rate of Return

The plaintiff is entitled to a fair and reasonable return upon the present value of its property used and useful in the service of its gas consumers (Bluefield Water Works Company case, supra; Southwestern Bell Telephone case, supra, and cases cited). If the investors were going to buy or build a property like that of the complainant, what amount would they feel that the property should earn in order to induce them to invest their money in the purchase or construction of such a property? Taking into consideration other classes of investment in this locality, with the [fol. 188] comparative risks and return thereon, the rate of return generally required to secure proper credit for borrowing money and financing its operations, what should a utility company subject to State regulation be permitted to earn in order that it might compete successfully with other businesses and be on a parity with them?

There seems to be some misunderstanding on the part of the defendant Attorney General as to the meaning of the rate of return referred to by the Court. His apparent contention is that it means the amount the plaintiff should pay in the way of interest on bonds and dividends on stock, and on that theory he offered proof as to loans made to and by various corporations and the rate at which they were made, and proof as to the selling price of various stocks and bonds and the yield thereon. My understanding is that it relates entirely to the return the corporation itself must earn over and above the cost of operation and taxes before it makes any distribution to its stockholders or bondholders. A corporation does not ordinarily expect to pay out all its earnings in the shape of dividends and, if it is successfully operated, certainly it would not be obliged to pay them out for interest on its obligations. Good business management requires that disbursements of this character should absorb only a portion of its earnings and some part should be carried to surplus account. It is these earnings, and not the amount disbursed to bond or stockholders, with which the courts are concerned in passing upon the confiscatory character of the rate. Just what this rate should be is not a fixed and established matter applicable alike to all classes of investment and all sections. Business men

discriminate between investment, and rates of interest and [fol. 189] return vary. As was said by the Statutory Court in the New York Telephone Company v. Public Service Commission, "The rate of return on property is a matter of custom, and custom is fundamentally opinion. Admitting it is and has been customary to allow as a reasonable rate of return for a regulated business like this one 8 per cent, the justification for the custom is the habit of business men, and a departure therefrom is not right because a Court or Commission prefers a lower rate * * * The question always raised in rate cases is this—what rate of return, with due regard to certainty and security will attract the intelligent investor?"

On this subject the plaintiff introduced the evidence of two witnesses, Mr. Allison, consulting engineer and adviser of banks and investors in public utility business and management, and Mr. Hoyt, vice-president in charge of public utility investments of the National City Company of this city. Their familiarity and qualifications for testifying on the subject were proven. Both had large experience with the subject and both testified that the plaintiff should receive a return of 8 per cent on the present cost to build or buy the property; that this amount would be required, and even more, to interest capital in a public utility such as the plaintiff.

While, of course, there is no guarantee on the part of the public authorities or anyone else that a public utility should be successful, yet if it could earn a proper return on the value of its property in the business without regulations or statutes preventing them so doing, then such regulation or statutes operate to deprive the company of its property without justification and are confiscatory. The de- [fol. 190] fendants claim that 6 per cent return would be sufficient in this case to prevent the statute being obnoxious to the constitutional provision mainly because the Supreme Court in Willcox v. Consolidated, supra, held in 1906 that such a return was not confiscatory on the facts in that case, although counsel for the Public Service Commission contended that this rate of return was also within the decision in Newton v. Consolidated Gas Company (258 U. S. 165) and other cases. With the decreased value of the dollar

and the changing conditions in the business and financial world due to the World War, the fact that a return of 6 per cent in 1906 was held not confiscatory is not authority for holding that at the present time and under present conditions it would still apply. While it is true that in the years past various rates ranging from 6 per cent in the first Consolidated Gas case to 8 per cent in the latest cases have been used to determine the confiscatory character of the return, the more recent cases, and those decided under present conditions, have uniformly tended to a higher rate.

Bluefields Company v. Public Service Commission, supra;
Minnesota v. Rand, 285 Fed. 18, 8, 30;
Brush Electric Company v. Galveston, 258 U. S. 388;
Bronx Gas and Electric Company v. Public Service Commission, 208 App. Div. 280.

I find that 8 per cent is a rate customarily required in the locality to be earned on the present value of the property of a regulated public utility, and that the plaintiff should be permitted to earn at least this amount.

[fol. 191] Deficiency in Earnings

Plaintiff sought to introduce evidence as to loss of earnings claimed to have been incurred by it during the period when it was compelled to operate under a rate established by authority of the Legislature or public authorities although resisting the same.

That there was a loss seems unquestioned, but as to the amount I did not take proof, as I thought and still think the Supreme Court of the United States has decided adversely to the plaintiff's position.

Georgia Railway & Power Company v. Railway Commissioners, supra;
Galveston Electric Company v. Galveston, supra;
Knoxville v. Knoxville Water Company, supra.

Judge Hand's Opinion

At the time of the passage of the act under consideration statements were made, which undoubtedly greatly in-

fluenced legislative action, to the effect that Judge Hand's opinion furnished good and sufficient reasons for believing that the plaintiff and other gas companies in the City of New York could furnish gas at the dollar rate, and receive a reasonable return on the value of their property used in the gas business.

It is now insisted by the defendant Attorney General that that opinion is controlling in the present case and that the Special Master is bound by his opinion as to the inclusion [fol. 192] and exclusion of items from the rate base and the manner in which the cost of making of gas is to be computed.

Inasmuch as the defendant Attorney General claims that under the method laid down by Judge Hand the plaintiff would receive a return of over seven per cent on its rate basis as so found, it becomes important to consider the effect of that decision, the circumstances under which it was rendered and what Judge Hand intended thereby.

The full opinion is to be found in Consolidated Gas Co. v. Newton, 267 Fed. 231. In that case there had been a bitter contest of practically every fact found by the Special Master, each side introducing evidence to support the position for which they contended. The cost of making gas at Astoria was proven by defendants as part of their case. The value of the real estate was proven by showing the assessed value as fixed by the Deputy Tax Commissioners of the City of New York. The value of the remaining property was shown by introducing the inventories and appraisals of the property in the 1906 suit, the unit prices applied to the properties inventoried and the extent to which such properties were then in existence and in use by the company. Proof was offered of the then unit prices for labor and material. On that basis the Master was asked to find that the then reproduction cost of the property used in 1906 and still in use was at least as much as it was then proven to be, and that the property added since 1906 was worth at least as much as it cost when erected and installed. The Master based his conclusion as to the value of the property on the actual investment therein, proof of which was offered first by the defendants, and in rebuttal by the plaintiff.

[fol. 193] In his opinion, the Special Master in that case said that the evidence showed that the costs of operation had varied in the different plants of the company and sometimes in the same plant on different days. Having referred to the varying costs as shown by the different plants, he proceeded, "Having in mind that the plaintiff must prove its case beyond any reasonable doubt, I reached the conclusion that the safest basis on which to work was the actual result of operations in the Astoria plant * * * that plant being the most efficient manufacturing plant, with modern labor-saving devices." He accepted the defendant's contention as to the investment cost being the proper manner of establishing the rate base. He found the rate base in that way, and made it up very largely as contended for by the defendants. He found the cost of operations as advocated by them and still found that the rate of return received was confiscatory.

When the report came up for confirmation, Judge Hand was even more drastic in his rulings. In dividing certain joint office expenses, he said, "I shall adopt it, but only because I am taking all doubts against the plaintiff." Again, in excluding the 14th and 42nd Street plants, he said it was done, "in accordance with my plan of resolving all doubts against the plaintiff." He calculated the value of the plants on the basis of cost, "not in any sense because I think the cost the test, but only because it is clear that at the present time anyway an estimate based upon cost is a most conservative one." In fixing the amount of working capital he said, "For working capital I take $2,000,000, not because I mean to fix any such sum, but as a conservative compromise between the plaintiff's figure of $2,800,000 [fol. 194] and Maltbie's of $1,480,000." After fixing the amount of the investment he said, It is more than probable that the plaintiff's whole investment is therefore properly valued at $115,000,000 at present prices, or twice what I have valued it."

In concluding that even under his policy as above announced the rate was confiscatory, he said, "In the figures I have used I think it clear that everything has been pared down unsparingly, and I take this occasion to say what I have already alluded to more than once already. It would be most unfair to accept any of these figures in fixing a rate.

The attitude of a Court is very different. It does not try to do justice between the company and the public, but only to see whether the actual rate can by any possibility still be a fair rate. In so doing it must take everything in favor of the rate. It would be the height of injustice if, in view of that attitude its conclusions so reached were treated as a fair basis for fixing a new rate. Furthermore, I have not hesitated to cut more ruthlessly in this case than if the result had been closer." It is now sought to uphold the $1.00 rate for 650 B. t. u. gas, in 1923 and 1924, by insisting that Judge Hand's discussion, made on the report and evidence then before him as to 1917-1919 conditions and made for the purposes and on the minimum basis above indicated, bind now the Special Master in this case, wherein different facts are presented, and different evidence produced by both plaintiff and defendants. A careful reading of the opinion shows clearly that Judge Hand, as he repeatedly said, was not attempting to determine the facts on the conflicting evidence presented after a consid-[fol. 195] eration of the weight to be given the testimony relating thereto produced by plaintiff and defendant, but was testing whether, even under the claims of the defendants and making every allowance in their favor both as to rate base and cost of operations, the statute could be sustained, and he found against it even under such theory.

When Judge Hand, in his opinion of August 5, 1920, fixed a rate for the plaintiff pending appeal by the defendants to the United States Supreme Court in that case, he disregarded the basis which he had preliminarily used for rigorously testing the unconstitutionality of the statute and prescribed a rate of $1.20 per thousand cubic feet, which rate the United States Supreme Court subsequently pronounced "a limitation in favor of the consumers." In February of 1921, upon the expiration of the six-month period for which he had limited the Consolidated Gas Company to a rate of $1.20, he removed this restriction, despite the pleas of the defendant public authorities that the $1.20 rate should be continued until the United States Supreme Court had decided their appeal.

Under the heading, "Difference between Present and Former Suits," I have shown the many and great varia-

tions between the issues presented then and now, and must conclude that while the decree and findings in the prior suit should be given their full force and effect, Judge Hand's opinion and discussion is not and was not intended to have any such force or effect as defendants contend.

I think Judge Hand, in stating that "the attitude of a Court is very different; it does not try to do justice between [fol. 196] the company and the public," was rather more radical than he could have intended, assuming that it be construed as meaning that a decision as to the confiscatory character of the rate is not to be based on a fair and judicial consideration of the weight to be given the evidence produced on both sides. Of course if, even under the defendants' contention, the rate could not be sustained, as in the previous case, it would be unimportant; but where the question is closer and the confiscatory character of the rate depends upon the rate base and the cost of operation, I think the decision of the higher courts clearly entitle the plaintiff as well as the defendants to have their evidence weighed under the ordinary rules, and a determination made after such consideration.

A careful reading of Judge Hand's opinion makes it clear that he based it entirely upon the investment cost of the company's property (except as to land, which was taken at assessed value), and that he entirely disregarded present value in his findings, as the basis above indicated was entirely sufficient to demonstrate his decision as to the confiscatory character of the eighty-cent rate. Although he argued persuasively that present reproduction cost must be accepted as the economic measure of present value, and although he stated in his opinion, as hereinbefore quoted, that the value of the plaintiff's investment at then present prices was $115,000,000 or twice what he had taken it at, he did not give this fact any consideration in his finding of a "rate base" for the purposes of that determination. This use of a minimum basis seems to be in conflict with the subsequently decided cases in the Supreme Court of the United States of Southwestern Bell Telephone Company [fol. 197] (supra) and Bluefields Water Works (supra), especially the latter, and other cases requiring the return to be on present value.

The 650 B. T. U. Standard

The provision of Chapter 899 of the Laws of 1923, which required the company to furnish in the territory affected gas of a standard of not less than 650 B. t. u. per cubic foot, measured under normal conditions of temperature and atmospheric pressure, is attacked on the ground that it is in violation of the Fourteenth Amendment of the Constitution of the United States, in that it deprives the plaintiff of its property without due process of law and denies to it the equal protection of the law. It is claimed that it is commercially and physically impossible for the company to comply with it, that it would be wasteful, uneconomical, would give poor service, at a much higher cost, and would be dangerous to life and property. It is also claimed that this provision of the statute is inseparable from that fixing the price to be charged, and if that is confiscatory the standard provision must fall with it.

As to this last contention I was of the opinion that it was separable from the price fixing provision of the statute, and so held in the case of the New York & Queens Gas Company and in the case of The Bronx Gas & Electric Company. The District Court, in passing upon the Special Master's report in those cases was of a different opinion, and I therefore must and do regard it as the law of this case that the rate and standard provision is not separable.

As to the other contentions, they are supported even more strongly by the testimony of Mr. Little, the defendant ex-[fol. 198] pert engineer witness, than by that of the plaintiff's witnesses. Mr. Little was most emphatic in his condemnation of this provision of the statute. He said, "They cannot make gas that will deliver to every consumer a minimum of 650 B. t. u., whether they make it with water-gas or coal-gas or a mixture." He stated that a coal-gas plant could not operate at all on that standard. He further testified that if gas of such a standard was furnished, it would be uneconomical, that the consumers would not get as much for their money, and that it would be hazardous to life and property in so doing. He also stated that the cost of the additional gas oil required would be at least as much as Mr. Wood's estimate, which was that it would

increase the cost of making such standard of gas by 4.95 cents per thousand cubic feet of gas made. A large amount of testimony was given on behalf of the plaintiff to the same effect, and I think it can be safely found that the enforcement of the 650 B. t. u. standard would be in effect a confiscation of the coal gas plants of the company and render it impossible to operate them under such standard, and would render it unsafe and hazardous to life and property to operate even the water-gas plants thereunder, and would be uneconomical, wasteful and give very poor results to the consumers, as well as increasing the cost of making such gas some 4.95 cents per thousand cubic feet of gas made.

The statute also provides that it should go into effect immediately, while the uncontradicted testimony is that it would require at least from six to nine months for the plaintiff to change the consumers' apparatus so as to be regulated for gas of this standard. The putting into effect [fol. 199] immediately of the statutory provision would be unconstitutional as depriving the company of its right to a safe and adequate review of the legality of the statute (Wadley Southern Railway Company v. Georgia, 235 U. S. 651; Bronx Gas & Electric Company v. Public Service Commission, 190 A. D. 13, 23-25.) The company therefore in any event should have an opportunity to a judicial review of the statute and adequate time to regulate the necessary apparatus to conform thereto if it is compelled to comply with such a statute.

The Statute as Affecting the Order of August 30, 1922, of the Public Service Commission as Accepted and Put into Effect by the Plaintiff

By an order made by the Public Service Commission of the State of New York on August 30, 1922, effective October 1, 1922, the said Commission, as then authorized by statute to do, fixed rates to be charged by plaintiff to its consumers (other than the City of New York), ranging from $1.15 per thousand cubic feet for the first 100,000 cubic feet of gas per meter per month to 95 cents per thousand cubic feet for over one million cubic feet per meter per month.

By its terms such order was to take effect on October 1, 1922, and continue in force until September 30, 1923, and thereafter until the Commission should otherwise order and require, the plaintiff to notify the Commission within ten days whether the terms and conditions of the order would be accepted and obeyed. A certified copy of the order was served on the plaintiff, and, on or about September 13, 1922, the plaintiff notified the Commission in writing that such order was accepted by the plaintiff and would be obeyed.

[fol. 200] Simultaneously with the making of the above mentioned order, the Commission made and caused to be served on the plaintiff, an order fixing a standard of gas to be furnished to its consumers of not less than 537 B. t. u. per cubic foot on a monthly average, and not less than 525 B. t. u. per cubic foot on a daily average for any three consecutive days in any month. This order was also to be effective October 1, 1922, and continue in effect until changed, modified or abrogated by the Commission. The plaintiff was required to notify such Commission within ten days after service of a copy of such order whether it was accepted and would be obeyed. On or about the 12th day of September, 1922, the plaintiff notified the Commission that this order would be accepted and obeyed.

Therefore, and in pursuance of the said orders of the Commission in cases Nos. 79 and 108, the plaintiff duly filed with said Commission and duly posted and published as required by law and the order of the said Commission, its tariff schedules setting forth rates, charges and classifications to be in force for the service to be furnished by the plaintiff in accordance with the said orders of the said Commission of August 30, 1922, and the plaintiff's filed acseptance of such orders; and the plaintiff has complied in all respects wih the terms, provisions and conditions of the said orders.

Thereafter plaintiff, as required to do in order to comply with such order as to the standard of gas to be furnished, changed the apparatus of its consumers to enable them to properly burn gas of that standard to be furnished under such order, a large force of men being employed for that purpose for a period of approximately nine months and at [fol. 201] an expense of many thousands of dollars in so doing.

The Public Service Commission has never, since August 30, 1922, changed, modified or abrogated its said order of that date either as to the price or quality of gas to be furnished to plaintiff's consumers.

On June 2, 1923, Chapter 899 of the Laws of 1923 became effective, providing that the rate to be charged should be $1.00 a thousand cubic feet of gas furnished, and that the thermal content thereof should be 650 B. t. u. Thus within the period fixed in the Commission's order of August 30, 1922, during which the company was to be permitted to charge a rate approximating $1.15 per thousand cubic feet for the bulk of its consumers for gas of a thermal content of not less than 537 B. t. u., the legislative Act changing both provisions became effective.

The plaintiff claims that this action of the Legislature was in violation of Section 10 of Article 1 of the Constitution of the United States, in that it impairs the obligation of the plaintiff's contract with the State of New York. In the previous cases before me I did not pass upon this question, as there were other grounds amply sufficient to justify declaring the statute confiscatory, and I felt that if this contention was to be made a ground for declaring the statute unconstitutional, it might better be done in the first instance by the District Court.

Judge Winslow in passing upon the Special Master's report in the case of the New York & Queens Gas Company v. Prendergast (1 Federal Reporter, 2nd Series, 351), in the District Court, has now upheld this contention of the [fol. 202] plaintiff, and, in a well-considered opinion, gives the reasons and authorities therefor.

It is not necessary for me to say anything further than that I regard his opinion as being the law of the case on that subject, and am bound to and do follow it.

Conclusion

The plaintiff also urged that the statute imposed unlawful and unreasonable discriminations against it which rendered it obnoxious to various provisions of the Constitution and therefore unlawful and void. The grounds upon which this contention rests are all in the record, and I have felt it unnecessary to pass upon them as they involve no finding of fact, and for that reason what I might say on

the subject would be of but slight assistance, possibly, to the Court. The grounds of my decision have been fully stated and the facts from which the Court may draw its conclusions are set forth at lenth. The complicated character of the relations between the companies, their methods of business and the importance of the questions raised are the only justification for the extent of the opinion and the length of the findings.

The questions have been argued very fully before me and, while a decision might be based on legal grounds which would obviate the necessity of findings as to the costs of operation and as to the present value of the useful property, I have felt it my duty under the direction of the Court to pass upon and present the facts in regard to those questions in order that the entire situation might be before the [fols. 203 & 204] Court and its decision might be based on such grounds as seem to it proper. The evidence which was taken at great length has been reviewed by me in the preparation of this opinion and report, and the exhibits in the case and the arguments of counsel given careful consideration.

On the facts and the law as I understand the decisions of the Courts, I have rendered this opinion and have made the findings hereto attached.

January 15, 1925.

Respectfully submitted.

James G. Graham, Special Master.

[fol. 205] In United States District Court

[Title omitted]

Report of the Special Master—January 15, 1925

To the Honorable Judges of the United States District Court for the Southern District of New York:

I, the undersigned, the Special Master appointed by the Honorable Francis A. Winslow, District Judge, by an order entered on the 7th day of August, 1923, amending the order herein entered on the 24th day of July, 1923, such order of reference directing such Special Master "to take the testi-

[fol. 206] mony and evidence upon the issues herein, make all needed computations and fully hear the facts and to report to the Court his findings of fact and conclusions of law, together with the evidence for the advisement of the Court;"

Do hereby respectfully report that, having been attended by counsel as below stated, I proceeded to take the proofs submitted and filed, together with a stipulation signed by the various solicitors waiving the signatures of the various witnesses to their several depositions and further waiving the filing of the original exhibits marked in evidence.

There appeared before me the following:

For the plaintiff: Sherman & Sterling, solicitors, by William L. Ransom, Jacob H. Goetz, Sanford H. E. Freund, and George G. Bogert, of counsel.

For the defendants William A. Prendergast, William R. Pooley, Charles Van Voorhis, Oliver C. Semple, and James A. Parsons, constituting the Public Service Commission of the State of New York: Charles G. Blakeslee, solicitor, by Harry Myron Chamberlain and Charles E. Murphy, of counsel.

For the defendant Carl Sherman, as Attorney-General of the State of New York: James A. Donnelly, solicitor, by James A. Donnelly, Harry Hertzoff, of counsel.

[fol. 207] Upon the proofs as taken I find and report as follows:

1. The plaintiff is a corporation, organized in the year 1884, under and in pursuance of the provisions of Chapter 367 of the Laws of 1884, entitled "An Act to authorize the consolidation of manufacturing corporations." The organization took place by the consolidation of six then existing gas companies, as follows:

New York Gas Light Company, incorporated in 1823.
Manhattan Gas Light Company, incorporated in 1830.
Metropolitan Gas Light Company, incorporated in 1855.
Harlem Gas Light Company, incorporated in 1855.
Municipal Gas Light Company, incorporated in 1874.
Knickerbocker Gas Light Company, incorporated in 1876.

2. At the time of consolidation, the six companies above described owned and used certain lands, buildings and other

property, real and personal, for, and were actually engaged in, the manufacture, sale and distribution of gas in what was then the City of New York, now the Borough of Manhattan, City of New York. In addition to the property above described, the six constituent companies were possessed of, owned and were in the actual enjoyment of perpetual franchises and rights:

(1) To be corporations and to exercise the privileges and rights of corporate action;

(2) To use the streets, alleys and public places of the City of New York, for the purpose of laying street mains therein and supplying gas through said mains to the inhabitants of the city;

(3) Sundry other intangible rights.

3. By virtue of the consolidation and of the law authorizing it, the plaintiff company became possessed of and became [fol. 208] the owner in fee simple of all of the real property owned by the six constituent companies and the owner of the franchises and rights then owned, possessed or enjoyed by the constituent companies and of the personal property owned by the said companies.

4. The plaintiff company has, ever since the date of consolidation, November 10, 1884, owned, possessed, used and enjoyed all of the said franchises and rights of the said constituent companies, and still does own, possess, use and enjoy the said franchises and each of them, together with additional rights and franchises from time to time acquired by it; and the plaintiff company, by virtue of the said franchises and rights, has ever since said date maintained and still does maintain its mains and services in the streets, alleys and public places of the City of New York, and has supplied and still does supply gas through said mains and services to the inhabitants of the City of New York. The plaintiff is required by law, under penalty, to supply gas, upon application of the owner or occupant, to all buildings and premises within one hundred feet of any mains laid by it, and to furnish gas-meters to its consumers without rent or charge.

5. The defendants William A. Prendergast, William R. Pooley, Charles Van Voorhis, Oliver C. Semple and James

A. Parsons, or the successor in office of any of them whose term may have expired since the commencement of this action, constitute the Public Service Commission of the State of New York, and are now acting as such Commission, having been duly appointed under and by virtue of the provisions of Chapter 480 of the Laws of 1910 of the State of New York, known as Chapter 48 of the Con- [fol. 209] solidated Laws of the State of New York, as amended and supplemented by several acts, including Chapter 134 of the Laws of 1921, prescribing their powers and providing for the regulation of certain public service corporations, including the plaintiff. The defendants are citizens of, and reside in, the State of New York, and at least one of the defendants resides in the Borough of Manhattan, City of New York, in the Southern District of New York. The defendants have and maintain an office, as such Public Service Commission, in the Borough of Manhattan, City of New York, within the Southern District of New York.

6. The defendant Carl Sherman is the Attorney-General of the State of New York, is a citizen of the State of New York, and resides in the City of Buffalo, in the State of New York. The defendant has and maintains an office, as such Attorney-General, in the Borough of Manhattan, City of New York, within the Southern District of New York.

7. The plaintiff owns and uses in its gas business three water-gas manufacturing plants known as the 11th Street, 21st Street and 99th Street Stations, which had an aggregate manufacturing capacity, as of June 1, 1923, of 58,000,000 cubic feet of gas per day. Subsequently to June 1, 1923, the plaintiff increased the manufacturing capacity of the 21st Street Station by 9,500,000 cubic feet of daily capacity, making the total present water-gas manufacturing capacity of the plaintiff, as of the time of the proofs before me, 67,500,000 cubic feet of gas per day.

8. As of June 1, 1923, the plaintiff owned and used two coal-gas plants, known as the 14th Street and 42nd Street [fol. 210] Stations, having a daily manufacturing capacity of 5,000,000 cubic feet and 4,500,000 cubic feet, respectively. During October, 1923, the plaintiff sold the land upon which these stations stood and proceeded to dismantle the properties, relying upon the added manufacturing capacity of

the 21st Street Station, then nearing completion, to provide in their stead the necessary manufacturing capacity in the Borough of Manhattan.

9. The plaintiff also owns and uses storage holders located on property owned by it in various parts of the City of New York, known as the 15th Street, 44th Street, 63rd Street, 65th Street, 111th Street, 132nd Street and Kingsbridge Holder Stations, which had an aggregate storage capacity, as of June 1, 1923, inclusive of the storage holders located at the manufacturing stations, of 61,550,000 cubic feet of gas. Subsequently to June 1, 1923, the plaintiff increased its gas storage capacity to 63,300,000 cubic feet of gas, the capacity of the 63rd Street Station having been increased by 2,000,000 cubic feet, and the storage holder at the 42nd Street station having been withdrawn from service.

10. The plaintiff also owns and uses office buildings located at 130 East 15th Street, Hester and Elizabeth Streets, 212 West 57th Street and East 114th Street and Third Avenue, in the Borough of Manhattan, City of New York, and numerous other parcels of land and buildings occupied and used in the gas business by the various departments of the company.

11. The plaintiff owns and uses 988.54 miles of gas mains, and 79,567 services, and owns and maintains upon the premises of consumers 576,939 meters for the supply of gas, [fol. 211] such quantities being stated as of June 1, 1923. The plaintiff also had on rental on consumers' premises, as of June 1, 1923, 277,224 gas appliances, consisting of cookers, stoves, ovens, broilers, ranges and the like; and owns and uses in its gas business a number of horses, carts and automobiles, scows, furniture and fixtures, and tools and implements.

12. As shown by the gas requirements of the system companies during the winters of 1921-1922, 1922-1923 and 1923-1924, the Astoria Light, Heat and Power Company and the New Amsterdam Gas Company, in each of those years had manufacturing capacity in excess of their requirements for their own gas business, including a reasonable reserve. The other gas companies on the transfer system (that is, the plaintiff Consolidated Gas Company, the Standard Gas

LightCompany, and the Central Union Gas Company) did not, nor do they now, possess sufficient plant manufacturing capacity to meet their respective requirements and maintain a reasonable necessary reserve. The Northern Union Gas Company and The East River Gas Company of Long Island City have no manufacturing plants but obtain gas from other affiliated companies on the transfer system. The combined maximum manufacturing plant capacity of the Consolidated Gas Company and its affiliated gas companies was, during the years 1922 and 1923, and still is, 211,800,000 cubic feet of gas per day. The maximum day's sendout for these companies, during the winter of 1922-1923, was 179,188,000 cubic feet of gas, leaving a reserve of plant capacity for the system companies of no more than 18.2 per cent. over the actual maximum daily requirement. Based upon this maximum send-out during the winter of 1922-1923, of 179,188,000 cubic feet, and upon a reasonable [fol. 212] reserve capacity, amounting, as above stated, to 18.2 per cent. of the maximum day's send-out, the proportionate part of the total system plant capacity of 211,800,000 cubic feet, required by each company on the transfer system during the year 1923, was as follows:

	Per cent
Consolidated Gas Company	64 38
Astoria Light, Heat & Power Company	0 03
New Amsterdam Gas Company (including The East River Gas Company of Long Island City)	12 54
Standard Gas Light Company	7 71
Central Union Gas Company	8 71
Northern Union Gas Company	6 63
	100 00

The capacity of the manufacturing plants owned by each company of the system, the plant capacity required by each company including a reserve of 18.2 per cent., and the extent to which each company was either a debtor or creditor for plant capacity, during the year 1923, are set forth in the following table, which was the basis of the inter-company charges actually rendered and paid for use of plant capacity during the year 1923:

Daily Plant Capacity in M Cubic Feet, Year 1922

	Plant capacity owned	Required with reserve	Required from other cos.	For use of other cos.
Consolidated Gas Co.	67,500	126,364	68,864	.....
Astoria Lt., Ht. & Pr. Co.	86,000	37	.....	85,963
New Amsterdam Gas Co. (inc. East River Gas Co. of L. I. City)	26,000	26,559	.....	9,441
Standard Gas Lt. Co.	10,500	16,328	5,828	.....
Central Union Gas Co.	11,800	18,428	6,628	.....
North'n Union Gas Co.	.....	14,043	14,043	.....
Total	211,800	211,809	95,284	95,284

During the winter of 1921-1922, the maximum day's send-out for the above-named companies amounted to 169,- [fol. 213] 563,000 cubic feet, and the reserve plant capacity over the actual maximum daily requirement, during the year 1922, amounted to 24.91 per cent. The respective plant capacity owned and the plant capacity required by each company, during the year 1922, and the extent to which each company was a debtor or creditor for plant capacity, representing the basis upon which inter-company charges for plant capacity were made and paid during the year 1922, were as follows:

Daily Plant Capacity, in M Cubic Feet, Year 1922

	Manufacturing capacity owned	Required with reserve	Required from other cos.	For use of other cos.
Consolidated Gas Co.	43,500	125,501	80,001	.....
*N. Y. Mutual Gas Lt. Co.	24,000	12,966	.....	11,034
Astoria Lt., Ht. & Pr. Co.	86,000	54	.....	85,946
New Amsterdam Gas Co. (inc. East River Gas Co. of L. I. City)	26,000	26,271	.....	9,729
Central Union Gas Co.	11,800	18,800	7,000	.....
North'n Union Gas Co.	.....	13,613	13,613	.....
Standard Gas Lt. Co.	10,500	10,503	6,003	.....
Total	211,800	211,809	100,729	100,729

*During the period from January 1, 1922, to August 31, 1922, only. The plaintiff purchased the property of the New York Mutual Gas Light Company, with the consent and approval of the defendant Public Service Commission, on August 31, 1922, and thereafter owned the additional plant capacity previously rented from that company.

To the extent that one company uses the plant capacity of another, compensation is made for the use of the necessary investment. For the purpose of fixing the carrying charge upon the investment in manufacturing and holder plants and other property devoted to the use of others, an investigation was made by Mr. George E. Woods, chief engineer [fol. 214] of the plaintiff, in behalf of all of the gas companies affiliated with the Consolidated Gas Company system, who embodied his opinion and recommendation in written reports, which were carefully examined by the officers and directors of the interested companies and were approved and adopted by them. If the plant of each company were isolated from the plants of the others, each would require a reserve capacity much in excess of that provided by the system as a whole, entailing a capital investment by each company much greater than that now required by it.

13. The plaintiff depends in part for its reasonable and necessary manufacturing capacity upon the manufacturing facilities of the Astoria Light, Heat and Power Company, such facilities being held available for and used by the plaintiff in the production of gas for its consumers. During the year 1923, manufacturing capacity of The Astoria Light, Heat and Power Company to the extent of 68,854,000 cubic feet per day, or approximately 80 per cent. of the total capacity of the Astoria plant, was so used and required by the plaintiff. During the year 1922, the plaintiff necessarily and reasonably used for its consumers, plant capacity of the Astoria Light, Heat & Power Company amounting to 75,112,000 cubic feet, and, during the eight months' period prior to the date of purchase of the gas property of The New York Mutual Gas Light Company on August 31, 1922, the plaintiff also reasonably and necessarily used plant capacity of that company to the extent of 4,981,000 cubic feet of daily capacity. By the purchase of the plant of the former New York Mutual Gas Light Company, its entire capacity became available to the needs of the plaintiff, materially reducing the amount of manufacturing capacity necessarily purchased by the [fol. 215] plaintiff during the year 1923.

14. The plaintiff also reasonably and necessarily used in part certain joint facilities owned by other companies in the transfer-of-gas system, consisting of the Astoria and

Ravenswood tunnels, under the East River and the connecting mains on Long Island owned by The East River Gas Company of Long Island City, and the Harlem River main, owned by The Standard Gas Light Company. In connection with its 63rd Street holder station, the plaintiff also uses jointly with The Standard Gas Light Company the boiler and governor house owned by that company, located at East 62nd Street, in the Borough of Manhattan, New York City.

15. Subsequently to January 1, 1909, the books of account of the plaintiff company, as well as of all other gas companies in the City of New York, have been required to be kept in accordance with the rules and regulations of the defendant Public Service Commission of the State of New York, or its predecessor the Public Service Commission for the First District, which Commissions have had certain jurisdiction over said companies pursuant to the provisions of the Public Service Commission Law (formerly the Public Service Commissions Law), of the State of New York; and I find that the books, accounts and record of the plaintiff company have been kept in conformity with such rules and regulations so prescribed by authority of the State of New York; that such books, accounts and records have been kept under the continuing supervision of the duly authorized representatives of the Legislature of the State of New York; and that such books, accounts and records accurately set forth the receipts, outlays and other facts therein undertaken to be shown.

[fol. 216] 16. By subdivision 5 of Section 66 of Chapter 480 of the Laws of 1910, as supplemented and amended by several acts, including Chapter 134 of the Laws of 1921, known as the "Public Service Commission Law," it is provided that, whenever the said Commission shall be of opinion, after a hearing had upon its own motion or upon complaint, that the rates, charges or classifications or the acts or regulations of any gas corporation, the definition of which includes the plaintiff, are unjust, unreasonable, unjustly discriminatory or unduly preferential or in anywise in violation of any provision of law, the said Commission shall determine and prescribe, in the manner provided by and subject to the provisions of Section 72 of the said chapter, the just and reasonable rates, charges and classifica-

tions thereafter to be in force for the service to be furnished, notwithstanding that a higher or lower rate or charge has theretofore been prescribed by general or special statute, contract, grant, franchise condition, consent or other agreement, and the just and reasonable acts and regulations to be done and observed.

17. By Subdivision 3 of Section 66 of the said chapter, as so supplemented and amended, it is provided that the said Commission shall have power by order to fix and change, from time to time, standards of the purity, illuminating power and heating power, and standards for the measurement thereof, of gas to be manufactured, distributed or sold by persons, corporations or municipalities for lighting, heating or power purposes, notwithstanding that other standards of the purity, illuminating power and heating power of gas and standards for the measurement thereof, may have been fixed by general or special statute, [fol. 217] and by order to require the gas so manufactured, distributed or sold to equal the standards so fixed by it, and to prescribe, from time to time, the reasonable minimum and maximum pressure at which gas shall be delivered by such persons, corporations or municipalities.

18. By Section 72 of the said chapter, as so supplemented and amended, relating to complaints as to the quality and price of gas, it is provided that, after a hearing and after such an investigation as shall have been made by the said Commission or its officers, agents, examiners or inspectors, the said Commission may, by order, fix just and reasonable prices, rates and charges for gas to be charged by a gas corporation, for the service to be furnished, notwithstanding that a higher or lower price has been theretofore prescribed by general or special statute, contract, grant, franchise condition, consent or other agreement, and may order such improvement in the manufacture, distribution or supply of gas, or in the methods employed by a gas corporation, as will in its judgment be adequate, just and reasonable, and that any such change in price shall be upon such terms, conditions or safeguards as the said Commission may prescribe. By Section 72 of the said chapter, it is further provided that the price fixed by the said Commission under the said Section 72 or under the said Subdivision 5 of Section 66, shall be the maximum price to be charged by

such gas corporation for gas for the service to be furnished within the territory and for a period to be fixed by the said Commission in the order, not exceeding three years, except in the case of a sliding scale, and thereafer until the Commission shall, upon its own motion or upon complaint of any corporation, person or municipality interested, fix a [fol. 218] higher or lower maximum price of gas to be thereafter charged.

19. By Subdivision 1 of Section 23 of the said chapter, as so supplemented and amended, it is provided that, within a time specified in the order of the Commission, every person and corporation upon whom it is served must, if so required in the order, notify the Commission whether the terms of the order are accepted and will be obeyed, and that every order of a Commission shall take effect at a time therein specified and shall continue in force either for a period which may be designated therein or until changed or abrogated by the Commission, unless such order be unauthorized by the said chapter or any other act or be in violation of a provision of the Constitution of the State or of the United States.

20. Prior to the amendment of said Chapter 480 of the Laws of 1910 by Chapter 134 of the Laws of 1921, the plaintiff was advised by counsel and believed that, under the construction placed by the Courts of the State of New York upon the said Chapter 480 of the Laws of 1910 before it was so amended, the Public Service Commission of the State of New York, for the First District, as then constituted, had no power to permit the plaintiff to increase the rate which it might charge for gas supplied, in excess of the maximum rate of eighty cents per thousand cubic feet prescribed by Chapter 125 of the Laws of 1906 of the State of New York.

21. On or about the 16th day of January, 1919, the plaintiff exhibited in the District Court of the United States for the Southern District of New York, its complaint against Charles D. Newton, as Attorney-General of the [fol. 219] state of New York, Edward Swann as District Attorney of the County of New York, State of New York, and Travis H. Whitney, Charles S. Hervey and Frederick J. H. Kracke, constituting the Public Service Commission

of the State of New York for the First District, whereby the plaintiff sought to have Chapter 125 of the Laws of 1906 of the State of New York, in so far as it prohibited the plaintiff from charging or receiving for gas manufactured or sold in the Borough of Manhattan a sum per one thousand cubic feet in excess of a rate of eighty cents per one thousand cubic feet, declared illegal and void, because in contravention of Section 10 of Article I and of the Fourteenth Amendment of the Constitution of the United States; and the plaintiff further prayed that writs of injunction issue out of the said Court, restraining each of the defendants from enforcing or attempting to enforce the provisions of said Act of 1906 against the plaintiff, and for other further relief, as in the said complaint was more fully set forth.

22. The defendants named in the complaint described in Finding No. 20, were duly served with process and duly appeared and respectively filed answers in the said cause. Thereafter, the said cause was duly referred to the Honorable Abraham S. Gilbert, as Special Master, to take all the testimony and evidence with respect to the issues therein, make all needed computations and fully find the facts, and report to the Court all the testimony and evidence received by him, together with his findings of fact and his recommendations as to the facts and the law; and thereafter such proceedings were had in the said cause that the said Special Master duly made his report, dated May 5, 1920, wherein and whereby he found, among other things, the [fol. 220] total reasonable cost of gas delivered to its consumers by the plaintiff; and wherein and whereby the said Special Master further found and reported that the amount invested in the plant and property of the plaintiff, used and useful in its gas business as of January 1, 1919, as shown by the plaintiff's books of account, and in certain property of other companies devoted to the use of the plaintiff, including the plant of The Astoria Light, Heat and Power Company, and including an allowance for the working capital for the plaintiff, was at least the sum of $74,854,-351.14; and wherein and whereby the said Special Master recommended that it be adjudged and decreed that Chapter 125 of the Laws of 1906, in so far as it provided that

the plaintiff should not charge or receive for gas manufactured, furnished or sold by it a sum per thousand cubic feet in excess of a rate of eighty cents, during the years 1918, 1919, and thereafter, was illegal and void, because in contravention of Section 10 of Article 1 of the Constitution of the United States and of the Fourteenth Amendment of said Constitution, and that the plaintiff should have the other and further relief against the defendants in that suit which was asked for in the complaint therein.

23. Thereafter, the said cause was duly heard in this Court; and on the 11th day of August, 1920, there was rendered and filed in the said Court a final decree, which passed upon the various exceptions of the parties to the said cause and confirmed the said report and findings of the said Special Master in all other respects, including those hereinbefore mentioned, and which adjudged that Chapter 125 of the Laws of 1906 of the State of New York, in so [fol. 221] far as it prohibited the plaintiff from charging and receiving more than at the rate of eighty cents per thousand cubic feet for the sale of gas in the Borough of Manhattan had been since at least January, 1918, and then was, confiscatory and deprived the plaintiff of its property without due process of law, contrary to the Fourteenth Amendment of the Constitution of the United States; and that said statute had been since at least January 1, 1918, and then was, invalid as violative of the said provisions of the Constitution of the United States, and adjudged and decreed that the plaintiff was entitled to the relief prayed for, and granted the permanent injunction prayed for in the said complaint.

24. Thereafter, an appeal from the said final decree was duly taken by the defendants to the Supreme Court of the United States; and the said decree was by that Court duly affirmed on or about March 6, 1922; and a mandate was duly issued by that Court accordingly, and was duly filed in this Court, and by an order duly made and entered in the said cause, the judgment of the Supreme Court was made in all respects the judgment of this Court.

25. On or about the 20th day of May, 1921, the defendant Commission upon its own motion, duly instituted a proceed-

ing before it for the purpose of investigating the rates charged by the various gas corporations in the City of New York, including the plaintiff and their operating expenses, revenues, service, properties and investment, and made an order for a hearing to be held before it in its Case No. 79 for that purpose; and thereafter, such proceedings were had that on or about the 30th day of August, 1922, the defendant Commission rendered and filed an opinion, setting [fol. 222] forth its findings and conclusions and the reasons for the making and entry of orders, prescribing a calorific standard for gas to be furnished and the rates for such gas to be charged by certain gas corporations, including the plaintiff, and thereupon and contemporaneously with the making and entry of an order prescribing a calorific standard for gas as hereinafter more fully described, the defendant Commission made and entered an order, wherein and whereby the defendant Commission found that, as of June 30, 1922, the investment in the property owned by the plaintiff and used in its gas business amounted to $56,597,757.62 (which sum did not include the property of the other companies used by the plaintiff in the service of its consumers), and that as of such date the value of such property, upon the basis of the reproduction cost thereof, was much greater, and wherein and whereby the defendant Commission further found that the plaintiff had been and was entitled to earn a fair return on at least the said sum, and wherein and whereby the defendant Commission ordered that on and after the 1st day of October, 1922, and until the 30th day of September, 1923, and thereafter until the defendant Commission should otherwise order, the just and reasonable rates to be charged by the plaintiff to all of its consumers in the City of New York, other than The City of New York, for gas of the thermal content set out in such order, and the classifications of the service furnished to such consumers, should be as follows:

First 100,000 cubic feet of gas per meter per month, $1.15 per thousand cubic feet.

Next 200,000 cubic feet of gas per meter per month, $1.10 per thousand cubic feet.

[fol. 223] Next 300,000 cubic feet of gas per meter per month, $1.05 per thousand cubic feet.

Next 400,000 cubic feet of gas per meter per month, $1.00 per thousand cubic feet.

All over 1,000,000 cubic feet of gas per meter per month, $0.95 per thousand cubic feet.

The rates above stated were fixed and prescribed by the defendant Commission for the supplying of gas of a thermal content, on monthly average, of not less than 537 British thermal units per cubic foot, as is more fully set out in Finding No. 28.

26. In and by the said order of August 30, 1922, it was further ordered by the defendant Commission that its said order should take effect October 1, 1922, and should continue in force until September 30, 1923 and thereafter until the Commission should otherwise order, and that, within ten days from the date of the service of a copy thereof, the plaintiff should notify the Commission in writing whether the terms and conditions of the said order were accepted and would be obeyed. In its opinion adopted and served contemporaneously with the entry of the said orders in Cases Nos. 79 and 108, the Commission stated, in pursuance of the authority vested in it by Section 72 of the Public Service Commission Law, as hereinbefore summarized, that "the rates to be established are to be effective for a period of one year, and thereafter until the Commission shall otherwise order"; and the said opinion further stated and represented to the gas companies affected thereby, including the plaintiff, that:

"Although the facts known to the Commission and con- [fol. 224] firmed by the analysis of exhibits in the conference indicate that the rates now fixed by the Commission could hardly be deemed adequate, if based only upon present conditions and present costs of manufacture, distribution, taxes, maintenance of property and return upon investment, the Commission feels confident that upon the greater stabilization of prices and the realization of certain prospective reductions in expense, the rates hereby put in force will approach the requirements of adequacy."

27. Thereafter, the said Commission, pursuant to the provisions of the said order and the authority vested in the Commission by Subdivision 1 of Section 23 of the Public

Service Commission Law as amended caused a certified copy of the said order of August 30, 1922, to be duly served upon the plaintiff; and on or about the 13th day of September, 1922, the plaintiff duly notified the said Commission in writing that the terms and conditions of the said order were accepted by the plaintiff and would be obeyed. The notification of acceptance, sent by the plaintiff to the said Commission as above stated, read and provided as follows:

"The Consolidated Gas Company of New York hereby acknowledges receipt of a copy of an Order certified by the Secretary of the Commission to have been adopted by the Commission on August 30, 1922, in the above-entitled proceeding, prescribing the rates to be charged for gas by the said company to all of its consumers other than the municipality of the City of New York, and the classifications of the gas service furnished to such consumers.

[fol. 225] The Consolidated Gas Company of New York hereby notifies the Commission that the said Order of August 30, 1922, and the terms and conditions thereof, are accepted by the Company and will be obeyed.

"In accepting, and agreeing to obey, the said Order of August 30, 1922, conditioned for the period therein prescribed, the Consolidated Gas Company of New York does not waive its right, upon any hearings or proceedings hereafter had, to a return upon the full value of its property at such time, nor its right to reimbursement for losses sustained by it since January 1, 1917, by reason of inadequate rates; nor does the Company admit that the rates prescribed by the said Order are adequate or that they are such as to afford to this Company just compensation for the gas service furnished by it, or a fair return upon its investment in its gas property as found by the Commission, much less upon the present value thereof. Increases in the costs of operations, particularly those due to the high prices necessarily paid for coal or coke, have aggravated the inadequacy of the rates now in force and leave the rates fixed by the said Order substantially less than adequate under present conditions. In deference, however, to the views of the Commission, reached after extended investigation, and in an expectation or hope that, as intimated by the Commission in its Opinion, some reductions

in operating expenses during the period stipulated by the Commission for the continuance of the rates now prescribed, may render such rates more nearly adequate, the [fol. 226] Consolidated Gas Company of New York has determined to, and does hereby accept, the said Order of August 30, 1922, upon the terms and conditions therein set forth."

28. On or about the 20th day of May, 1921, contemporaneously and in conjunction with its said proceedings as to rates in Case No. 79, the said Commission duly instituted a proceeding before it, upon its own motion, in its Case No. 108, relative to the standards of purity, lighting power and heating power of gas and the standards of measurement thereof, in the City of New York and suburban territory, and such proceedings were had in the said last-mentioned proceeding that on or about the 30th day of August, 1922, contemporaneously with its said rate order in Case No. 79, the said Commission made and entered an order in its Case No. 108, identified by reference with and correlated to its contemporaneous order in Case No. 79, wherein and whereby it found that the standard of 22-candle power theretofore prescribed by statute was unreasonable, uneconomical and improper, that the continuance of such standard would not be in the public interest, and that a standard of quality and measurement based upon the heating power of gas, as thereinafter more particularly specified, should be fixed by the Commission, and wherein and whereby the said Commission directed that on and after October 1, 1922, each gas corporation supplying manufactured gas in the Boroughs of Manhattan, Brooklyn, The Bronx, Queens and Richmond, comprising the City of New York, and in the franchise territory of the Queens Borough Gas and Electric Company in the County of Nassau, should, in lieu of the existing standard or standards, furnished to its consumers a quality [fol. 227] of gas which should comply with certain requirements therein prescribed, including a requirement, that, under specified conditions, the gas furnished should have a total heating value on a monthly average of not less than 537 British thermal units per cubic foot, and a daily average of not less than 525 British thermal units per cubic foot on any three consecutive calendar days in

any month, all as more fully set forth in the said order; and wherein and whereby it was further directed that the said order should take effect on the date specified therein, and should continue in effect until changed, modified or abrogated by the said Commission, and that, within ten days of the service of a copy thereof, each gas corporation therein described, including the plaintiff, should notify the said Commission whether the said order was accepted and would be obeyed.

29. Thereafter, the said Commission caused a certified copy of the said order in its Case No. 108 of August 30, 1922, to be duly served upon the plaintiff; and on or about the 12th day of September, 1922, the plaintiff duly notified the said Commission in writing that the terms and conditions of the said order in Case No. 108 were accepted and would be obeyed by the plaintiff.

30. Thereafter, and in pursuance of the said orders of the Commission in Cases Nos. 79 and 108, the plaintiff duly filed with the said Commission, and duly posted and published as required by law and order of the said Commission, its tariff schedules, setting forth the rates, charges and classifications to be in force for the service to be furnished by the plaintiff, in accordance with the said orders of the said Commission in its Case No. 79 and Case No. 108, of August 30, 1922, and the plaintiff's filed acceptance [fol. 228] of such orders; and the plaintiff has complied in all respect with the terms, provisions and conditions of the said order in Case No. 79 and of the said Order in Case No. 108.

31. In compliance with the terms and conditions prescribed in the said orders of August 30, 1922, the plaintiff proceeded to and did, under the supervision of the defendant Public Service Commission, make changes in the adjustment of the various gas appliances in use by its consumers, in order to adapt them to the safe and efficient use of gas of the standard therein prescribed and also various changes in the operating of its manufacturing plants. As promptly as was practicable after the said orders of the Commission became effective, the plaintiff adjusted the burners on the appliances of its consumers to be suitable for gas having a heating value ranging from approximately 550

to 600 British thermal units per cubic foot, and necessarily and reasonably expended for labor and materials in making such changes in the adjustment of gas appliances more than $196,000. Until the completion of this adjustment, which required more than six months, it was necessary to, and the plaintiff did, produce gas of not less than 600 British thermal units per cubic foot, in order to provide satisfactory and safe service to the consumers whose appliances had not yet been adjusted. Upon completion of the adjustment of the gas appliances in use by the plaintiff's consumers, the plaintiff commenced the gradual reduction in the thermal content of the gas produced by it to a lower prescribed standard; and at the time of the enactment by the Legislature of Chapter 899 of the Laws of 1923, the plaintiff was supplying gas on an average of about 585 to 595 British thermal units per cubic foot, which standard it has main-[fol. 229] tained to the present time. I find the action of the plaintiff in not further changing the calorific standard furnished, pending the determination of the constitutionality of the statute, to have been reasonable, prudent and proper, and an exercise of sound engineering and business judgment.

32. By Chapter 899 of the Laws of 1923 of the State of New York, entitled: "An act to amend the Public Service Commission Law, in relation to the charge for illuminating gas in cities containing a population of 1,000,000 or over," the Public Service Commission Law and the provisions thereof in relation to the rates chargeable for gas furnished to consumers within the City of New York, were undertaken to be amended by the insertion of the following new section:

"67a. Charge for gas in cities of one million or more. A gas corporation engaged in the business of manufacturing, furnishing or selling illuminating gas in a city containing a population of one million or over shall not charge or receive for gas furnished or sold in such city a sum per one thousand cubic feet in excess of one dollar, nor furnish in such city gas of a standard less than six hundred and fifty British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure. The Public Service Commission

notwithstanding any other provision of this chapter shall not allow a rate or charge in the case of such cities in excess of such sum."

This Act provided that it should become effective immediately upon its being signed by the Governor of the State of New York, which took place on June 2, 1923.

[fol. 230] 33. The City of New York, in which the plaintiff is engaged in the business of manufacturing, furnishing, and selling illuminating gas, is a city "containing a population of one million or over," and is the only city of such size and population within the State of New York. The Constitution of the State of New York, in its classification of the cities of the State, does not state or recognize a classification of cities under which one class is made up of cities containing a population of one million or over.

34. Under the Public Service Commission Law as amended by Chapter 899 of the Laws of 1923, the Commission has not the power or jurisdiction to prescribe, authorize, allow or fix, for the plaintiff or other gas companies in the City of New York, a rate in excess of one dollar per thousand cubic feet for gas of not less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure.

35. As of December 31, 1923, the plaintiff had paid up capital consisting of 3,562,782 8/50ths shares of common stock of no par value outstanding, amounting to $178,223,875.96, and 274,819 shares of six per cent cumulative participating preferred stock of the par value of $50 per share outstanding amounting to $13,740,950, in addition to debts outstanding and other invested resources.

36. In the present suit, the periods covered by the proof before me as to operating revenues and expenses of the plaintiff's gas business and of the affiliated gas companies included the years 1922 and 1923, and also the estimated cost of production and distribution of gas by the plaintiff based on the volume and quality of gas supplied during [fol. 231] 1923, and upon wages and prices current and actually paid as of May 1, 1924. Proofs were offered of the operating expenses, based upon the classification of ac-

counts followed in the plaintiff's books, taking cognizance of the separate corporate entities of the several companies whose property is used in part by the plaintiff, setting forth the actual inter-company charges made for such joint use of property; and proofs were also offered of the actual cost of manufacture and distribution of the gas supplied to the plaintiff's consumers, exclusive of all sums paid by the plaintiff representing return on investment in property of other companies, setting forth the aggregate cost of each item of such operating expenses, by the segregation to the appropriate accounts of the amounts paid to other companies, not so subdivided on the plaintiff's books. Proofs were also presented by the plaintiff of the investment in the property owned and used by it in the gas business, and in certain jointly used properties owned by other companies, used in part by the plaintiff in the service of its consumers, and of the reproduction cost of such property.

37. Since October 1, 1922, the gas operations of the plaintiff have been carried on under the calorific standard of measurement of quality, as prescribed by the said Order of August 30, 1922 and the average calorific content of the gas supplied by the plaintiff during the period from October 1, 1922, to December 31, 1922, was about 609 British thermal units per cubic foot, and during the year 1923 was about 593 British thermal units per cubic foot. Prior to October, 1922, the plaintiff supplied gas conforming to the 22-candle power standard prescribed by Chapter 125 of the Laws of 1906.

38. The rates charged by the plaintiff to its general con- [fol. 232] sumers during the years 1922 and 1923, were, from January 1, 1922, to September 30, 1922, $1.25 per thousand cubic feet of gas, and from October 1, 1922, to December 31, 1923, the rates prescribed by said order of the Commission of August 30, 1922, of $1.15 per thousand cubic feet with certain gradations for quantity consumption, the average rate being about $1.145, such rates since June 2, 1923, having been charged in pursuance of the preliminary injunction granted to the plaintiff herein. The rate charged by the plaintiff to the City of New York was seventy-five cents per thousand cubic feet, in accordance with the provi-

sions of Chapter 736 of the Laws of 1905 of the State of New York. The average rate for gas charged to all of the plaintiff's consumers during the year 1923, was equivalent to about $1.1428 per thousand cubic feet.

39. The plaintiff necessarily and reasonably used in the generators at its manufacturing plants, in the manufacture of water gas, during the year 1922, 18.68 pounds of anthracite broken coal, and 13.69 pounds of coke, aggregating 32.37 pounds of generator fuel, per thousand cubic feet of gas made, and during the year 1923, 23.93 pounds of anthracite broken coal, and 8.98 pounds of coke, or a total of 32.91 pounds of generator fuel, per thousand cubic feet of gas made. In the production of the water gas made and purchased by the plaintiff, during the year 1922, there were necessarily and reasonably used, 11.29 pounds of anthracite broken coal, and 21.91 pounds of coke, per thousand cubic feet of gas made, or a total of 33.20 pounds of generator fuel per thousand cubic feet of gas made. During the year 1923, there were necessarily and reasonably used for such generator fuel, 13.27 pounds of anthracite broken [fol. 233] coal and 20.48 pounds of coke, or an aggregate of 33.75 pounds per thousand cubic feet of gas made.

40. The plaintiff also necessarily and reasonably used under its boilers, in the manufacture of water gas during the year 1922, 14.05 pounds of boiler fuel per thousand cubic feet of gas made, consisting of screenings from the anthracite generator coal, coke screenings and coke breeze, or the equivalent in water gas tar (one gallon of such tar weighing about nine pounds, and one pound of tar having a fuel value of about 1.7 pounds of the grade of solid fuel now and recently supplied). During the year 1923, such boiler fuel necessarily and reasonably amounted to 14.92 pounds per thousand cubic feet of gas made. In the production of the water gas made and purchased by the plaintiff, such boiler fuel amounted, during the year 1922, to 13.83 pounds per thousand cubic feet of gas made, and, during the year 1923, to 13.39 pounds per thousand cubic feet of gas made, such quantities representing the average amount of fuel used at all plants for the manufacture of the gas furnished to the plaintiff's consumers, reflecting

the effect of the use in part by the Astoria plant of electricity for power purpose instead of steam, and also, of the generation of steam in part at the Astoria plant by waste heat boilers.

41. In the manufacture of water gas, there is required in addition to the cost of the fuel, the expense of handling fuel used in the generators and under the boilers.

42. I find that the necessary and reasonable cost to the plaintiff of the generator fuel and boiler fuel, inclusive of the expense of labor, cartage, etc., in handling such fuel, used by it in the manufacture of water gas by the plaintiff during [fol.234] the year 1922, was 21.06 cents per thousand cubic feet of gas made; and that the reasonable and necessary cost of such fuel, during the year 1923, was 22.08 cents per thousand cubic feet of gas made. Such cost of generator fuel and boiler fuel inclusive of the cost of handling, used in the manufacture of water gas made and purchased by the plaintiff, reasonably and necessarily amounted, during the year 1922, to 18.98 cents per thousand cubic feet of gas made, and, during the year 1923, to 19.71 cents per thousand cubic feet of gas made.

43. The plaintiff necessarily and reasonably used, on the average, in the manufacture of water gas of the quality supplied during the year 1922, 4.06 gallons of gas oil per thousand cubic feet of gase made; and in the manufacture of gas of the quality supplied during the year 1923, necessarily and reasonably used, on the average, 3.7 gallons of gas oil per thousand cubic feet of gas made. In the manufacture of the water gas made and purchased by the plaintiff, of the quality actually supplied during the year 1922, the amount of gas oil reasonably and necessarily used, on the average, was 4.1 gallons per thousand cubic feet of gas made; and in the manufacture of such water gas of the quality supplied during the year 1923, the amount of gas oil so used, on the average, was 3.73 gallons per thousand cubic feet of gas made.

44. For the manufacture of water gas of a delivered content of not less than 650 British thermal units per cubic foot, as prescribed by Chapter 899 of the Laws of 1923, there would be required, under the conditions of manu-

facture and distribution existing in the plaintiff's gas business, at least 4.7 gallons of gas oil per thousand cubic feet of gas made.

[fol. 235] 45. I find that the reasonable and necessary average cost to the plaintiff of the gas oil used by it in the manufacture of water gas of the quality of gas supplied during the year 1922, was 23.14 cents per thousand cubic feet of gas made; and such cost for the quality of gas furnished during the year 1923, was 20.4 cents per thousand cubic feet of gas made. I find that the reasonable and necessary average cost of the gas oil used in the manufacture of water gas made and purchassed by the plaintiff, of the quality of gas furnished during the year 1922, was 23.52 cents per thousand cubic feet of gas made; and such cost, for the quality of gas furnished during the year 1923, was 20.6 cents per thousand cubic feet of gas made.

46. In the manufacture of water gas there is also required the use of iron mass, shavings, city water and incidental minor items of materials and supplies, and there is incurred the expense of labor, cartage, etc., in handling spent materials. The cost of these items to the plaintiff amounted during the year 1922 to 0.81 cents per thousand cubic feet of gas made, and during the year 1923, to 1.07 cents per thousand cubic feet of gas made. The cost of such items in the manufacture of water gas made and purchased by the plaintiff during the year 1922, was 0.68 cents per thousand cubic feet of gas made, and during the year 1923, was o.81 cents per thousand cubic feet of gas made.

47. In the manufacture of water gas under the conditions such as obtain at the plants of the plaintiff, and in the plants of the companies supplying gas to plaintiff's consumers, there is realized as a residual credit under average operations, water gas tar and drip oil, equal in amount to about 17.5 per cent. of the gas oil used. A large part of the tar so realized by the plaintiff during the years 1922 and 1923, [fol. 236] was used by it as fuel under the boilers, being charged to the cost of boiler fuel at 4.8 cents per gallon, and being credited at the same figure to the cost of production. Such water gas tar and drip oil sold during the years 1922 and 1923 was credited to the cost of production at the sale price thereof.

48. There is also necessary in the manufacture of water gas the employment of gas making labor and repair labor, the use of repair material, and the incurring of miscellaneous works expense. During the year 1922, under the prices and rates of pay then in force, the cost of gas making labor in the plants of the plaintiff was 3.49 cents, of repair labor and material 4.44 cents, and miscellaneous works expense 1.03 cents per thousand cubic feet of gas made. During the year 1923, under the prices and rates of pay then in force, the cost of gas making labor was 3.83 cents, of repair labor and material 4.42 cents, and miscellaneous works expense 1.06 cents per thousand cubic feet of gas made. The cost of such items in the manufacture of water gas made and purchased by the plaintiff during the year 1922, was, for gas making labor 3.23 cents, for repair labor and material 3.98, for electric power plant operating 0.21 cents, and for miscellaneous works expense one cent per thousand cubic feet of gas made. During the year 1923, under the prices and rates of pay then prevailing, such cost was, for gas making labor 3.29 cents, for repair labor and material 3.63 cents, for electric power plant operating 0.21 cents, and for miscellaneous works expense 1.05 cents per thousand cubic feet of gas made.

49. During the year 1922, the plaintiff manufactured at its own plants, 8,204,826,000 cubic feet of gas, and neces- [fol. 237] sarily and reasonably purchased, to meet the demands of its consumers, from the Astoria Light, Heat & Power Company, the New Amsterdam Gas Company, the Standard Gas Light Company of the City of New York, and (during the eight months ended August 31, 1922) the New York Mutual Gas Light Company, 13,866,707,100 cubic feet of gas, the total quantity of gas necessarily and reasonably made and purchased during that year, amounting to 22,071,533,100 cubic feet of gas. During the year 1923, the plaintiff manufactured at its own plants, 9,804,127,000 cubic feet of gas, and necessarily and reasonably purchased from the Astoria Light, Heat & Power Company, the New Amsterdam Gas Company, and the Standard Gas Light Company, 15,419,848,500 cubic feet of gas, the total quantity of gas so made and purchased during that year amounting to 25,223,975,500 cubic feet. For the purpose of this suit, I have found the cost to the plaintiff of the production and

distribution of gas, as hereinafter more specifically stated, applicable to the total quantity of gas required to meet the demands of the plaintiff's consumers, without regard to the fact that such gas may have been made in part in the plaintiffs own plants or purchased in part from its affiliated companies, and have included in the several items of the plaintiff's operating expenses only such elements of actual cost of labor, material and expense, as would have been included in the respective items if all of the gas reasonably required by the plaintiff to supply the demands of its consumers were manufactured at its own plants. I recognize that the separate corporate entities of the companies supplying gas to the plaintiff necessitated inter-company charges for the use by the plaintiff of the property of other companies, but for the purposes of this case, I have included [fol. 238] as a part of the plaintiff's operating expenses only the amount found by me in Finding No. 63, for the reasonable and necessary cost of retirement expense applicable to the total property used by the plaintiff in its gas business, including the property of other companies used by the plaintiff, since I have made no deduction from the plaintiff's charge for retirement expense on account of the portion of the plaintiff's property used by others. I prefer to test the statute under review by determining the rate of return permitted to the plaintiff upon the total property reasonably and actually devoted to its use, over and above its operating expenses, after excluding therefrom all return on the investment in such property owned by other companies.

50. I find that the plaintiff necessarily and reasonably maintained as reserve manufacturing plants the 14th Street and 42nd Street Stations, until the time of their withdrawal on October 30, 1923, and October 31, 1923, respectively; that these plants, equipped and in readiness to produce gas within a reasonable time according to the requirements for gas by the plaintiff's consumers, were essential to a reasonable reserve manufacturing capacity over the actual maximum day's demand for gas, for which an equal reserve capacity elsewhere would otherwise have been necessary; and that the maintenance of these plants available for use, if required, to meet the peak demands for gas, until such time as an equivalent capacity was immediately assured at the

21st Street station and additional capacity had been projected at a new plant site west of the East River (viz., the Hunts Point plant), was sound and prudent judgment on the part of the engineers and executives of the plaintiff company. The reasonable and necessary cost of so maintaining these plants was, during the year 1922, 0.09 cents, [fol. 239] and during the year 1923, 0.04 cents, per thousand cubic feet of gas made and purchased.

51. During the year 1922, under the prices of materials and labor at that time in force, the reasonable and actual cost of manufacture of gas of the quality supplied by the plaintiff to its consumers during that year, applicable to both the gas made at the plants of the plaintiff and to the gas purchased from other companies, exclusive of gas storage expense, and exclusive of any return on any property so used, was 49.93 cents per thousand cubic feet of gas made and purchased, and during the year 1923, under the prices of materials and labor at that time in force, such cost of manufacture of gas of the quality supplied during that year, exclusive of gas storage expense, was 46.88 cents per thousand cubic feet of gas made and purchased.

52. I find the reasonable and necessary cost to the plaintiff for gas storage, during the year 1922, was 1.16 cents per thousand cubic feet of gas made and purchased, and during the year 1923, was 1.09 cents per thousand cubic feet of gas made and purchased by the plaintiff.

53. I find that the reasonable and actual cost to manufacture the gas supplied by the plaintiff to its consumers, applicable to both the gas manufactured by the plaintiff and to the gas purchased, exclusive of any return on any property so used, and exclusive of the amounts actually paid by the plaintiff in the cost of gas purchased and in the payments made for use of manufacturing plant capacity, for taxes, insurance, renewals and replacements, and other general and miscellaneous expenses, was, during the year 1922, for the quality of gas supplied during that year, 51.09 cents per thousand cubic feet of gas made, and [fol. 240] during the year 1923, for the quality of gas supplied during that year, 47.97 cents per thousand cubic feet of gas made.

54. In the manufacture and sale of gas, a percentage of gas made is necessarily and unavoidably lost, due to condensation, difference in temperature at the consumers' meters, slow meters, leakage, and the like. The relative amount of gas so lost varies according to the sales of gas in relation to the mileage and size of mains, the character of the soil in which the mains are laid, the severity of winter weather, and various other causes. The unaccounted for gas, as to the plaintiff, amounted, during the year 1922, to 6.42 per cent., and during the year 1923, to 4.31 per cent., and I find such amounts of unaccounted for gas of the plaintiff to be moderate and reasonable, and that, in calculating the plaintiff's present requirements and costs, these approximate figures should be used as a basis of computation.

55. During the year 1922, the plaintiff sold 20,580,285,600 cubic feet of gas, and during the year 1923, sold 24,057,694,200 cubic feet of gas. The sales of gas during the year 1922 reflected the addition, for the last four months of the year, of the entire volume of the gas used by the former consumers of the New York Mutual Company. The plaintiff's sales of gas during the year 1923, included the gas sold to such consumers so acquired, during the whole year 1923. Aside from such factors, consumption of gas and the volume of its sale varies from time to time, depending in large part upon the weather and consequent factors. The low mark of gas sales is found in the warm summer months when the absence of consumers from their homes [fol. 241] and the weather conditions eliminate the use of gas for heating and lessens its use for cooking and lighting. The peak or maximum demand is found in the winter months. The plaintiff must, therefore, be prepared, not only to make sufficient gas to meet the total annual demand, but also to meet such maximum day's demand as may develop, and the maximum day in any year may exceed the maximum day of any previous year. The increased use, in recent years, of gas as a substitute for coal for heating and other domestic uses, has a tendency to accentuate the maximum day's demand in relation to the annual output, and thus to require a relatively larger plant capacity in relation to the average daily requirements and in relation to each thousand cubic feet of gas sold to each

consumer, thus requiring a larger sum to be paid, as a part of the price per thousand cubic feet of gas sold, for return upon the value of such required amount of property. A reasonable reserve must provide not only for a reserve manufacturing capacity to meet increased demands for gas by the plaintiff's consumers over the actual previous maximum day's demand, but also a reserve capacity equal to the capacity of the largest generating unit, as accidents or the need for repairs may at any time take this unit out of use, and the plaintiff must, therefore, have sufficient manufacturing capacity to meet a possibly increased maximum day's demand if it should occur at a time when the largest unit was under repair and not immediately available for gas production. I find a reserve manufacturing plant capacity of from 20 per cent. to 25 per cent. of the plaintiff's actual maximum day's requirements to be reasonable and necessary for the uninterrupted supply of gas to the plaintiff's consumers.

[fol. 242] 56. Under the conditions existing in the plaintiff's gas business, provision must be made by the plaintiff for additional manufacturing capacity, as required in the judgment of its engineers and responsible officers, in advance of such actual increased demand for gas, as a period of about two years is necessary for the construction of additional units of the size to be suitable for the most economical manufacture of gas. The plaintiff purchased shortly after June 1, 1923, a large tract of land at Hunts Point, in the Borough of The Bronx, City of New York, for the purpose of providing the necessary land for such additional manufacturing capacity, and commenced the construction of a substantial manufacturing unit upon the said parcel, to be available for use in 1925. I find that the purchase of such land was prudent and reasonably necessary for the immediate and prospective requirements of the plaintiff's gas business and that of the system companies.

57. I find that the actual and reasonable cost of production of the gas supplied by the plaintiff to its consumers upon the basis hereinbefore indicated, of including therein only outlays for the labor and material costs of manufacture, and exclusive of any return on any property so

used, was, during the year 1922, 54.79 cents per thousand cubic feet of gas sold, and during the year 1923, 50.29 cents per thousand cubic feet of gas sold.

58. I find that the actual and reasonable cost of distribution to the plaintiff of the gas supplied by it to its consumers, including distribution superintendence and supplies and expenses, gas meter and installation work, work on consumers' premises—miscellaneous, repairs of gas mains, repairs of gas services, repairs of gas meters, repairs of gas distribution tools, repairs of gas appliances, [fol. 243] repairs of buildings, repairs of street lamps, commercial expenses, salaries—general office, supplies and expenses—general office, general law expense, claims and arrears expense, claims for damages, insurance, vacations and sickness, contributions to employees' Mutual Aid Society, superannuation, stable and automobile expense, miscellaneous general expense, undistributed adjustments, duplicate gas charges, uncollectible bills, and repairs, insurance, etc., applicable to property rented to others, was, during the year 1922, 30.39 cents per thousand cubic feet of gas sold, and during the year 1923, 27.61 cents per thousand cubic feet of gas sold. Such cost of distribution excludes the actual cost of work on consumers premises—gas supply inspection, interest on consumers deposits, rate cases expenses, and expenses in re P. S. C. Hearings, amounting to $268,267.08 during the year 1922 and $280,705.10 during the year 1923, which items I have excluded solely for the purposes of this case, as more fully set out in my opinion accompanying this report, although such items of expense should be included in operating expenses in determining a reasonable and adequate rate for gas.

59. I find that the reasonable and necessary amount of taxes actually paid by the plaintiff upon the property used in its gas business, including the property owned by the plaintiff and the property of other companies used by the plaintiff, was, during the year 1922, 9.09 cents per thousand cubic feet of gas sold, and during the year 1923, 10.02 cents per thousand cubic feet of gas sold. The foregoing figures of taxes for the years 1922 and 1923 exclude the portions of gross earnings taxes and of the Federal income taxes actually paid applicable to earnings from gas

[fol. 244] sales at rates in excess of the $1.00 rate during the period prior to the enactment of Chapter 899 of the Laws of 1923, as more fully set out in the accompanying opinion. I have also excluded, solely for the purposes of this suit, the excess dividends tax, and the real estate tax upon one-third of the land at Kingsbridge Station, and have eliminated the real estate of corporations taxes applicable to contested duplicate assessments, and the interest on unpaid taxes.

60. There should be included as part of the total cost of making and distributing the gas furnished by the plaintiff to its consumers, the cost of Renewals and Replacements (Retirement Expense) applicable to the property so used in the service of such consumers. During the years 1922 and 1923, the plaintiff charged for such retirement expense applicable to renewal and replacement of its own property used in the gas business, based upon its actual experience over a period of years, the sum of 3.5 cents per thousand cubic feet of gas sold, and in addition paid certain sums to other companies for retirement expense applicable to the property of such companies used by the plaintiff. I find that the reasonable and necessary cost of retirement expense to the plaintiff during the years 1922 and 1923, and as of the present time, applicable to the total property devoted to the use of the plaintiff in its gas business, was and is at least the sum of 3.5 cents per thousand cubic feet of gas sold.

61. The plaintiff performs certain services for its affiliated companies, the cost of which it apportions to the companies benefitted, upon bases determined in good faith by the executive officers of the company, in the exercise of their best judgment upon all the facts known to them, and [fol. 245] the sums so apportioned to the affilated companies are credited to the appropriate expense accounts on the books of the plaintiff. Such services include the operation of certain departments by the plaintiff for the requirements of other companies as well as for its own needs, including the department of mains and services, the chemical department, the construction department, the payroll department, the promotion department, the department of claims and arrears, and other departments, and include also the rendering of other services, such as the maintenance of

pressure gauges, pumping drips, the operation and maintenance of the 63rd Street and Kingsbridge holder stations for joint use, the operation of the general switchboard and the restaurant in the general office building, and the allocation of the services of the chief engineer, advertising manager, steam engineer, meter department engineers, and other like expenses. No reasons have been adduced for disturbing or doubting these allocations made in good faith by the responsible officers, and I find the apportionments of such expenses as actually made by the plaintiff between its operating expenses in its gas business and services rendered for other companies or for other departments of its own business, to be fair and reasonable, and in no respect excessive or unreasonable as to the proportion thereof charged against its gas operations for the services of its consumers.

62. The evidence adduced in this record affords no ground for expecting that the prices of material and wages paid for labor entering into the manufacture and distribution of gas will, on the whole, be reduced from the wages and prices now being paid by the plaintiff.

63. The plaintiff derives an income from the rentals of [fol. 246] gas appliances, from its profit on the sale of appliances, and the like, which is classified as miscellaneous operating revenue, of which the plaintiff gives it consumers the benefit by crediting the sums so received against the cost of manufacturing and distributing gas. During the year 1922 such miscellaneous operating revenue reasonably amounted to 9.31 cents per thousand cubic feet of gas sold, and during the year 1923, to 8.48 cents per thousand cubic feet of gas sold.

64. I find that the net actual and reasonable cost of gas delivered to its consumers by the plaintiff during the years 1922 and 1923, after eliminating therefrom the items of operating expenses excluded by me for the purposes of this suit, and exclusive of all interest upon investment in property owned by the plaintiff or in property of other companies devoted to the plaintiff's use, was and is, in cents per thousand cubic feet of gas sold, as follows:

	Year 1922	Year 1923
Cost of production	$0.5479	$0.5029
Cost of distribution, etc	.3039	.2761
Taxes	.0909	.1002
Retirement expense	.0350	.0350
Total reasonable cost	$0.9777	$0.9142
Less miscellaneous operating revenue	.0931	.0848
Net reasonable cost	$.8846	$0.8294

65. I find that the present case cost of manufacture and distribution of the gas supplied to its consumers by the plaintiff, after eliminating the items of operating expenses excluded by me for the purposes of this suit, based upon the actual conditions existing during the year 1923 and upon the quality of gas actually supplied during the year 1923, at prices of coal, coke, gas-oil and residuals, current as of [fol. 247] May 1, 1924, exclusive of all interest upon investment in property owned by the plaintiff or in property of other companies devoted to the plaintiff's use, in cents per thousand cubic feet of gas sold, is as follows:

	Present cost
Cost of production	$0.4845
Cost of distribution, etc.	.2761
Taxes	.1002
Retirement expense	.0350
Total reasonable cost	$0 8958
Less miscellaneous operating revenue	.0848
Net reasonable cost	$0.8110

66. The plaintiff actually paid to the Astoria Light, Heat & Power Company during the year 1922, and to the New York Mutual Gas Light Company during the eight months ended August 31, 1922 (prior to the date of the sale of that company's gas property to the plaintiff), for the use of manufacturing plant and facilities owned by those companies and necessarily and reasonably devoted to the use of the plaintiff, the sum of $2,049,833.70, representing a re-

turn of 8% upon the actual investment of those companies in such property so devoted to the plaintiff's use. The plaintiff also actually paid, during the year 1922, to the East River Gas Company of Long Island City and the Standard Gas Light Company, for the use of distributing system and other property owned by those companies and necessarily and reasonably used by the plaintiff, the sum of $345,599.70, representing an 8% return upon the investment in such property, making a total of $2,395,433.40 paid by the plaintiff during the year 1922, for return on investment in other companies' property used by the plaintiff, amounting to 11.64 cents per thousand cubic feet of gas sold by the plaintiff. During the year 1923, at which time [fol. 248] the manufacturing plant of the former New York Mutual Gas Light Company had been acquired by the plaintiff and was available in entirety to the plaintiff's needs, thereby reducing the amount of plant capacity necessarily procured by the plaintiff from other companies to the extent of the capacity so procured from the New York Mutual Gas Light Company, the plaintiff actually paid to the Astoria Light, Heat & Power Company for the use of manufacturing plant and facilities, the sum of $1,903,264.70, representing a return of 8% upon the investment of that company in such property. The plaintiff likewise actually paid during the year 1923 to the East River Gas Company of Long Island City and the Standard Gas Light Company, for the use of distributing system and other property, the sum of $318,575.55, representing an 8% return upon the investment in such property, making a total of $2,221,840.25 paid by the plaintiff during the year 1923, for the return on investment in other companies' property used by it, amounting to 9.24 cents per thousand cubic feet of gas sold by the plaintiff. For reasons hereinbefore indicated, I have found the cost of production and distribution of gas, exclusive of any return on investment on any property used by the plaintiff. For the determination of the amount of return on the plaintiff's own property used in its gas business, in accordance with the actual expenditures for operating expenses as recorded in the plaintiff's books of account, there should be added to the plaintiff's operating expenses, for the year 1922, at least the sum of 11.64 cents

per thousand cubic feet of gas sold, and for the year 1923, at least the sum of 9.24 cents per thousand cubic feet of gas sold.

67. I find that the net cost of gas of the quality sup-[fol. 249] plied to their consumers by the companies forming the so-called transfer-of-gas system, as shown by the books of account of the several companies comprising such system (viz., the Consolidated Gas Company, The Astoria Light, Heat and Power Company, New Amsterdam Gas Company, The East River Gas Company of Long Island City, Central Union Gas Company, Northern Union Gas Company, The Standard Gas Light Company and during the period prior to August 31, 1922, the New York Mutual Gas Light Company), exclusive of the above stated items of operating expenses of the said companies, such cost being stated in cents per thousand cubic feet of gas sold, after eliminating all inter-company charges and all return upon property or investment actually paid by one company to another for the use of property and/or facilities, and after giving the effect to miscellaneous operating revenues, was and is as follows:

	Year 1922	Year 1923
Cost of production	$0.5408	$0.5022
Cost of distribution, etc.	.2947	.2777
Taxes	.0885	.1053
Retirement expense	.0350	.0350
Total cost	$0.9590	$0.9202
Less miscellaneous operating revenue	.1001	.0939
Net cost	$0.8589	$0.8263

68. I find that the present cost of manufacture and distribution of the gas supplied to their consumers by the aforesaid system gas companies, as shown by their respective books of account, exclusive of the above stated items of operating expenses of the said companies, based upon the actual conditions existing during the year 1923 and for the quality of gas actually supplied during the year 1923, at [fol. 250] the current prices of coal, coke, gas-oil, and residuals, in cents per thousand cubic feet of gas sold, after

eliminating all inter-company charges and all return upon property or investment actually paid by one company to another for the use of property and/or facilities, and after giving effect to miscellaneous operating revenue, was and is as follows:

	Present cost
Cost of production	$0.4835
Cost of distribution, etc.	.2777
Taxes	.1053
Retirement expense	.0350
Total present cost	$0.9015
Less miscellaneous operating revenue	.0939
Net present cost	$0.8076

69. I find that the manufacture and distribution by the plaintiff of gas of a thermal content of not less than 650 British thermal units, as prescribed by Chapter 899 of the Laws of 1923, during the year 1922, at the prices of materials and labor actually paid during this period, would have cost at least 3.11 cents per thousand cubic feet of gas made, or equivalent to 3.34 cents per thousand cubic feet of gas sold, more than the cost of production and distribution of the gas actually made and supplied by the plaintiff to its consumers during that year; and during the year 1923, at the prices of materials and labor actually paid during this period, would have cost at least 4.33 cents per thousand cubic feet of gas made, or equivalent to 4.54 cents per thousand cubic feet of gas sold, more than the cost of production and distribution of the gas actually made and supplied by the plaintiff to its consumers during that year.

70. I find that the manufacture and distribution of gas [fol. 251] of a thermal content of not less than 650 British thermal units, as prescribed by Chapter 899 of the Laws of 1923, during the year 1922, at the prices of materials and labor actually paid during this period, would have cost a least 2.94 cents per thousand cubic feet of gas made, or equivalent to 3.15 cents per thousand cubic feet of gas sold, more than the cost of production and distribution of the gas actually made and supplied by the plaintiff and

The Astoria Light, Heat and Power Company during that year; and during the year 1923, at the prices of materials and labor actually paid during this period, would have cost at least 4.95 cents per thousand cubic feet of gas made, or equivalent to 5.19 cents per thousand cubic feet of gas sold, more than the cost of production and distribution of the gas actually made and supplied by the plaintiff and The Astoria Light, Heat and Power Company during that year.

71. I find that the fair and reasonable market value of land (unimproved) owned by the plaintiff and used and useful in its gas business, was, as of June 1, 1923, and is, at least the sum of $13,375,000, such land comprising the following parcels:

Present Value of the Land Owned and Used by the Plaintiff

Block	Lot	Location	Value	Total
239	1, 5	Hester & Elizabeth Sts	.....	$175,000
368	1	11th Street Station	$465,000	.....
369	1, 10, to 15	11th Street Station	650,000	.....
382	22	11th Street Station	351,875	.....
				1,466,875
870	47, 60	General Office Property	510,000	.....
		Less Portion Rented (61.8%)	315,180	.....
				194,820
982	13	14th Street Station	$437,500	.....
988	1	14th Street Station	680,000	.....
991	1 & 47	14th Street Station	429,555	.....
				1,547,055
[fol. 252]				
989	1	15th Street Station	.....	$210,000
985	7, 19, 20	17th St. Storage Yard	.....	216,000
951	35	21st Street Station	65,000	.....
952	7, 29, 30, 35	21st Street Station	370,000	.....
953	1	21st Street Station	552,000	.....
978	5, 6	21st Street Station	475,000	.....
979	1, 27	21st Street Station	571,000	.....
987	37	21st Street Station	133,000	.....
				2,166,000
1089	1			
1107	7	42nd Street Station	$2,000,000	.....
1090	23	42nd Street Station	135,000	.....
				2,135,000
1092	16	44th Street Station	$302,000	.....
1093	9	44th Street Station	351,000	.....
				653,000
1028	38	57th Street Office	.....	660,000
1457	6	63rd Street Station	.....	179,000
1157	1	65th Street Station	.....	1,057,000
1177	21	66th Street Office & Yd	.....	440,000
1670	1	99th Street Station	$464,000	.....
1692	1	99th Street Station	260,000	.....
				724,000

Block	Lot	Location	Value	Total
1682	8, 11	111th Street Station	$368,000	.....
1683	18	111th Street Station	83,000	.....
1704	5	111th Street Station	362,500	.....
1712	2	111th Street Station	78,250	.....
			.....	891,750
			.....	46,500
1642	33	114th Street Office	$80,000	.....
1998	50, 53 to 56	132nd Street Station	227,000	.....
1999	1	132nd Street Station	.....	307,000
			.....	21,000
2108	23	159th Street Shop	.....	200,000
2497	132	Cromwell Ave. & Exterior St	.....	170,000
3236	1	Kingsbridge Station	.....	.....
		Total present value of land (unimproved)		$13,460,000

72. I find the cost to reproduce the manufacturing plant, distributing system and other tangible property owned by the plaintiff and used and useful in its gas business, as of June 1, 1923, inclusive of certain property owned by the plaintiff and used jointly with other companies, based upon the unit prices of labor and material prevailing as of that time and as of the time of the hearings before me, exclusive of working capital and of going value, was and is, without any deduction for so-called "depreciation," but after deducting the sums hereinafter stated, at least the sum of $113,642,391.54, made up as follows:

[fol. 253] Reproduction Cost of Property Owned and Used by the Consolidated Gas Company in the Gas Business as of June 1, 1923

Exclusive of Working Capital and Going Value

Land	$13,460,000 00
Buildings	8,849,297 20
Manufacturing Plants and Holders	11,340,432 56
Holder Stations and Miscellaneous Locations	6,311,765 38
Street Mains	27,450,000 00
Services	4,350,000 00
Meters, Cocks, etc.	6,500,000 00
Gas Appliances	5,750,000 00
General Equipment, including Office and Stable Equipment and Scows	831,523 00
Tools and Implements	202,363 00
Laboratory Equipment	23,905 00
	$85,069,286 14

Less amount necessary to put property in condition as if new	531,292 50
	$84,537,993 64
Undistributed Structural Costs	21,323,397 90
Franchises and Rights (212 U. S. 219; 267 Fed. 231; affirmed 258 U. S. 165)	7,781,000 00
	$113,642,391 54

73. Certain of the property owned by the plaintiff, is used jointly with other companies of the transfer-of gas system, such property including the 48-inch connecting main in Manhattan and The Bronx, the 48-inch transfer main and the 36-inch distributing mains in The Bronx, the Kingsbridge holder station, and certain small mains in The Bronx. I find the cost to reproduce that portion of such property owned by the plaintiff but devoted to the use of other companies, as of June 1, 1923, included in the aforesaid cost of reproduction of the plaintiff's property, was and is the sum of $3,243,676.43, made up as follows:

Land	$85,000 00
Buildings	109,030 00
Manufacturing Plants and Holders	522,500 00
Street Mains	1,798,221 13
Undistributed Structural Costs	728,925 30
	$3,243,676 43

[fol. 254] 74. I find that the reasonable and necessary working capital of the plaintiff in its gas business, as of December 31, 1922, and as of the present time, was and is, at least the sum of $3,500,000.

75. The plaintiff also submitted proofs before me of the amount of going value possessed by the plaintiff in its gas business, as of June 1, 1923, and as of the present time, such evidence having been given by several witnesses called in behalf of the plaintiff, based upon methods of computation of such going value. No testimony was presented by the defendants' witnesses as to the amount or method of computation of the going value of the plaintiff, as of June 1, 1923, or the present time. I find that the reasonable and

necessary going value of the plaintiff in its gas business, as of June 1, 1923, and of the present time, was and is, at least the sum of $9,000,000.

76. I find that the cost to reproduce the manufacturing plant, distributing system and other tangible property owned by the plaintiff, used and useful in its gas business, as of June 1, 1923, inclusive of working capital and going value, was as of June 1, 1923, at least the sum of $122,898,715.11, made up as follows:

Reproduction Cost of Property Owned by the Consolidated Gas Company and Devoted to the Service of its Consumers as of June 1, 1923

Reproduction cost of tangible property as of June 1, 1923		$113,642,391 54
Less the portion thereof devoted to use of other companies, as of June 1, 1923		3,243,676 43
Tangible property owned and used by plaintiff as of June 1, 1923		$110,398,715 11
Investment in working capital reasonably required as of June 1, 1923		3,500,000 00
Investment in going value, as of June 1, 1923		9,000,000 00
		$122,898,715 11

[fol. 255] 77. I find the cost to reproduce the portion of the manufacturing plant, distributing system and other tangible property owned by The Astoria Light, Heat and Power Company used by and useful to the plaintiff in its gas business, as of June 1, 1923, based upon the unit prices of labor and material prevailing as of that time and as of the time of the hearings before me, inclusive of working capital but exclusive of any allowance for easement, franchise, or going value, was and is, without any deduction for so-called "depreciation," but after deducting the sums hereinafter stated, at least the sum of $31,041,333.66, made up as follows:

Reproduction Cost of the Property of the Astoria Company Used in the Plaintiff's Gas Business as of June 1, 1923

Land	$3,314,373 94
Buildings	4,692,626 82
Manufacturing plants and holders	14,916,794 20
Special reinforced concrete bulkhead	141,092 46
Tools and implements	114,992 47
General equipment	43,883 99
Furniture and fixtures, including mess hall contents and miscellaneous lockers	41,279 17
	$23,265,043 05
Percentage of amount necessary to put buildings and plants in condition when new	468,392 19
	$22,796,650 86
Undistributed structural cost	5,844,682 80
Working capital	2,400,000 00
	$31,041,333 66

78. The plaintiff likewise necessarily and reasonably used, as of June 1, 1923, and still uses in the service of its consumers certain other property, owned by The East River Gas Company of Long Island City, the reproduction cost of the portion so used, as of June 1, 1923, based upon unit prices of labor and material prevailing as of that time, and as of the time of the hearings before me, was and is at least the sum of $8,266,253.52, made up as follows:

[fol. 256] Reproduction Cost as of June 1, 1923, of Portion Used by the Plaintiff

Property owned by The East River Gas Company of Long Island City:	
Astorial tunnel	$5,086,537 80
Ravenswood tunnel	678,127 61
48-inch and 60-inch mains in Long Island City and Astoria	600,846 31
Undistributed structural cost	1,900,741 80
Present reproduction cost of property used by the plaintiff	$8,266,253 52

79. The plaintiff also necessarily and reasonably used as of June 1, 1923, and still uses, in the service of its consumers, certain other property, owned by The Standard Gas Light Company, the reproduction cost of which, as of June 1, 1923, based upon unit prices of labor and material prevailing as of that time, and as of the time of the hearings before me, was and is at least the sum of $353,390.19, made up as follows:

Reproduction Cost as of June 1, 1923, of Portion Used by the Plaintiff

Property owned by The Standard Gas Light Company:	
48-inch Harlem River main	$190,692 32
62nd Street boiler and governor house	85,146 37
Undistributed structural cost of property of the Standard Company used by the plaintiff	77,551 50
Reproduction cost	$353,390 19

80. I find that the cost to reproduce the manufacturing plant, distributing system, and other property used by the plaintiff in its gas business, as of June 1, 1923, based upon the prices of materials and labor prevailing at that time, and as of the time of the hearings before me, including [fol. 257] both the property owned by the plaintiff and used in its gas business and the property of other companies devoted to the use of the plaintiff in the service of its consumers, was and is, without any deduction for so-called "depreciation," at least the sum of $162,559,692.48, consisting in summary of the following:

Reproduction Cost of Property Used by the Plaintiff in Its Gas Business as of June 1, 1923

Property of Consolidated Gas Co.	$122,898,715 11
Property of The Astoria Light, Heat & Power Co.	31,041,333 66
Property of The Standard Gas Light Co.	353,390 19
Property of The East River Gas Company of Long Island City	8,266,253 52
Total reproduction cost of property used by the plaintiff, as of June 1, 1923	$162,559,692 48

81. I find that the actual reasonable cost of additions, extensions, and improvements in and to the plaintiff's manufacturing plants, distributing system and other tangible property, during the period from June 1, 1923, to December 31, 1923, which should be added to the reproduction cost of the plaintiff's property as of June 1, 1923, amounted to $2,137,906.17. The withdrawals from the property of the plaintiff used in its gas business, during the period from June 1, 1923, to December 31, 1923, including the withdrawals of the 14th Street and 42nd Street Stations, at unit prices as of June 1, 1923, amounted to $9,712,031.53, making a net decrease during this period applicable to the reproduction cost of the plaintiff's used and useful property, of $7,574,125.36.

82. From all the facts appearing before me, I therefore find the reproduction cost of the property owned by the plaintiff and used and useful in its gas business, was as of [fol. 258] December 31, 1923, and is as of the present time, at least the sum of $115,324,589.75.

83. I find that the actual reasonable cost of additions, extensions and improvements in and to the manufacturing plant of The Astoria Light, Heat and Power Company, during the period from June 1, 1923, to December 31, 1923, which should be added to the present value of the property of that company as of June 1, 1923, amounted to the sum of $124,062.91, of which sum, property in the amount of

$99,342.65 was devoted to the use of the plaintiff in its gas business. The withdrawals from property of The Astoria Light, Heat and Power Company during the period from June 1, 1923, to December 31, 1923, at the unit prices at which such property was included in the reproduction cost as of June 1, 1923, amounted to $24,072.51, of which sum, property in the amount of $19,275.92 was devoted to the use of the plaintiff in its gas business, making net additions during this period applicable to the present value of the property of The Astoria Light, Heat and Power Company used by the plaintiff in the service of its consumers, of $80,066.73.

84. From all the facts appearing before me, I find that the reproduction cost of the property used by the plaintiff in its gas business, including the property owned by the plaintiff and the property of other companies devoted to the use of the plaintiff in the service of its consumers, was as of December 31, 1923, and is, as of the present time, at least the sum of $155,065,633.85, made up as follows:

[fol. 259] Reproduction cost of property used by the plaintiff as of June 1, 1923		$162,559,692 48
Less net decrease during the period from June 1, 1923, to December 31, 1923, in reproduction cost of property owned by the plaintiff and used in its gas business (after withdrawing at their present value the 14th and 42nd Street stations)		7,574,125 36
		$154,985,567.12
Net additions during the period from June 1, 1923, to December 31, 1923, to reproduction cost of the property of The Astoria Light, Heat & Power Company devoted to the use of the plaintiff		80,066 73
Reproduction cost of the total property used by the plaintiff in its gas business as of December 31, 1923		$155,065,633 85

85. I find the original cost to the plaintiff of its property used and useful in its gas business as of December 31, 1922, as shown by its books of account, exclusive of expenditures made but not charged to fixed capital for interest during construction, engineering and superintendence and other undistributable structural costs and exclusive of working capital and going value, was at least the sum of $57,006,798.32, made up as follows:

[fol. 260] Real Estate	$14,508,516 24	
Less that not claimed to be used in the gas business	4,004,395 82	
		$10,504,120 42
Manufacturing plant and holder stations	17,474,216 11	
Less that not claimed to be used in the gas business	1,383,588.93	
		16,090,627 18
Street mains	13,515,294 66	
Services	1,948,503 04	
Meters	4,333,542 61	
Cocks and connections	435,960 32	
Furniture and fixtures	561,468 83	
Horses, wagons and harness	11,236 35	
Tools and implements	193,887 74	
Scows	11,921 20	
Gas appliances rented	3,503,700 17	
Automobiles and Accessories	218,006 73	
Organization	168,596 13	
Other intangible capital	1,009,970 00	
Total	25,912,087 78	
Less that part of the jointly used property used by other companies	3,281,037 06	
		22,631,050 72
Franchises and rights (212 U. S. 19)		7,781,000 00
Total property of Consolidated Gas Company used in its gas business		$57,006,798 32

86. I find the original cost to the Astoria Light, Heat & Power Company of its property used and useful in its gas business as of December 31, 1922, as shown by the books of account, exclusive of working capital, was and is at least the sum of $25,769,744.29; the working capital reasonably required for the conduct of its gas business was at least the sum of $2,550,000; the proof before me shows that of the above stated minimum investment in the property of the Astoria Light, Heat & Power Company, the actual investment in that portion devoted to the use of the plaintiff in its gas business amounted to $24,734,332.97, and I find such investment in property of the plaintiff to be reasonable and necessary to the plaintiff to meet the demands of its customers.

[fol. 261] 87. The plaintiff used during the year 1922, and still uses in the service of its consumers, certain other property owned by The East River Gas Company of Long Island City and by The Standard Gas Light Company; and I find that the original cost to those companies of the portion of such properties so used by the plaintiff in its gas business as of December 31, 1922, was and is at least the sum of $4,319,996.11, made up as follows:

Property of the Standard Gas Light Company

Actual cost as of December 31, 1922	$451,673 26
Actual cost of portion used by plaintiff	180,409 02

Property of East River Gas Company of Long Island City

Actual cost of December 31, 1922	$6,723,687 64
Actual cost of portion used by plaintiff	4,139,587 09

88. I find the original cost of the manufacturing plant, distributing system and other tangible property actually used by the plaintiff in its gas business as of December 31, 1922, including the investment of plaintiff in its property so used and investment of The Astoria Light, Heat & Power Company, The Standard Gas Light Company, and The East River Gas Company of Long Island City in the respective properties owned by those companies and devoted to the use of the plaintiff in the service of its con-

sumers, inclusive of going value, amounted to at least the sum of $98,561,127.40, made up as follows:

[fol. 262] Property of Consolidated Gas Company	$57,006,798 32
Working Capital	3,500,000 00
Going Value	9,000,000 00
Total	$69,506,798 32
Property owned by other companies devoted to the use of the Consolidated Gas Company of New York:	
The Astoria Light, Heat & Power Company	24,734,332 97
Standard Gas Light Co.	180,409 02
East River Gas Company	4,139,587 09
Total	$98,561,127 40

89. I find that the original cost to the plaintiff of its property used and useful in its gas business, as of June 1, 1923, as shown by its books of account, exclusive of expenditures made but not charged to fixed capital for interest during construction, engineering and superintendence, and other undistributable structural costs, and exclusive of working capital and going value, was at least the sum of $59,078,363.44, made up as follows:

Real estate	$14,597,479 43	
Less that not claimed to be used in the gas business	3,791,930 95	
		$10,805,548 48
Manufacturing plant and holder stations	17,540,068 52	
Less that not claimed to be used in the gas business	1,348,069 25	
		16,191,999 27
Street mains		13,531,059 10
Services		1,971,101 26
Meters	4,352,693 46	
Cocks and connection	442,831 68	

Furniture and fixtures	576,361 59	
Horses, wagons and harness	11,252 16	
Tools and implements	225,415 23	
Scows	11,921 20	
Gas appliances rented	3,506,632 75	
Automobiles and accessories	232,840 87	
Organization	290,939 64	
Other intangible capital	1,009,970 00	
		10,660,858 58
		53,160,602 69
[fol. 263] Less that portion of jointly used property used by other companies		$1,783,239 25
		51,377,363 44
Less 1/3 Kingsbridge land		80,000 00
Franchises and Rights (212 U. S. 19; 267 Fed. 231; affirmed 258 U. S. 165)		7,781,000 00
		$59,078,363 44

90. I find that the original cost to The Astoria Light, Heat and Power Company of its property used and useful in its gas business, as of June 1, 1923, as shown by its books of account, exclusive of working capital, was and is, at least the sum of $26,136,953.16. The working capital reasonably required for the conduct of its gas business, was at least the sum of $3,000,000. The proofs before me show that, of the above stated minimum investment in the property of The Astoria Light, Heat and Power Company, the actual investment in that portion devoted to the use of the plaintiff in its gas business amounted to $23,331,245.86, and I find such investment in property of that company to be reasonable and necessary to the plaintiff to meet the demands of its consumers.

91. As hereinbefore stated in Findings Nos. 86 and 87, the plaintiff used as of June 1, 1923, and still uses in the service of its consumers certain other property, owned by The East River Gas Company of Long Island City and by The Standard Gas Light Company, and I find that the original cost to those companies of the portion of such property so used by the plaintiff in its gas business, as of

June 1, 1923, was and is, at least the sum of $3,982,194.33, made up as follows:

[fol. 264]

	Actual cost as of June 1, 1923	Actual cost of portion used by plaintiff
Property of The Standard Gas Light Company:		
48-inch Harlem River Main	$197,911 54	$111,712 95
62nd Street Boiler & Governor House	275,838 50	75,443 04
Property of The East River Gas Company of Long Island City:		
Astoria Tunnel	5,177,126 91	2,922,275 98
Ravenswood Tunnel	700,000 00	395,121 31
48-inch and 60-inch Mains in Long Island City and Astoria	846,192 61	477,641 05
		$3,982,194 33

92. I find that the original cost of the manufacturing plant, distributing system and other tangible property actually used by the plaintiff in its gas business, as of June 1, 1923, including the investment in its property so used and investment of The Astoria Light, Heat and Power Company, The Standard Gas Light Company and The East River Gas Company of Long Island City, in the respective properties owned by those companies and devoted to the use of the plaintiff in the service of its consumers, inclusive of going value, amounted to at least the sum of $98,891,803.63, made up as follows:

Property of the Consolidated Gas Company of New York:		
Fixed capital	$59,078,363 44	
Working capital	3,500,000 00	
Going value	9,000,000 00	
		$71,578,363 44
Property owned by other companies devoted to the use of the Consolidated Gas Company of New York:		
The Astoria Light, Heat & Power Company	$23,331,245 86	
The Standard Gas Light Company	187,155 99	
The East River Gas Company of Long Island City	3,795,038 34	
		27,313,440 19
		$98,891,803 63

[fol. 265] 93. During the period from June 1, 1923, to December 31, 1923, the plaintiff actually expended for additions, extensions and improvements in and to its gas property, the sum of $2,532,895.35. The plaintiff also made retirements of gas property withdrawn from service during the period from June 1, 1923, to December 31, 1923, amounting, at the original cost of such property (including the original cost of the property withdrawn at the 14th and 42nd Street Stations), to $2,843,496.84, making a net decrease from the original cost of the plaintiff's gas property, during this period, of $310,601.49.

94. I find, therefore, that the original cost of the property owned by the plaintiff and used by it in its gas business, as of December 31, 1923, as shown by its books, inclusive of working capital and going value, was at least the sum of $71,267,761.95, made up as follows:

Original cost of Plaintiff's property used in its gas business as of June 1, 1923	$59,078,363 44
Net additions from June 1, 1923 to December 31, 1923	310,601 49
	$58,767,761 95
Investment in working capital reasonably required as of June 1, 1923	3,500,000 00
Investment in going value as of June 1, 1923	9,000,000 00
	$71,267,761 95

95. During the period from June 1, 1923, to December 31, 1923, The Astoria Light, Heat and Power Company actually expended for additions, extensions and improvements in and to its gas property, the sum of $708,526.91, and made retirements of property withdrawn during such period amounting at the original cost of such property, to $29,558.55, making net additions applicable to the investment of that company during such period of $678,968.36. [fol. 266] Of the above stated net additions during such period, the portion devoted to the requirements of the plaintiff in the service of its consumers amounted to at least the sum of $336,768.50.

96. I find that the original cost of the manufacturing plant, distributing system and other tangible property actually used by the plaintiff, including the actual investment of the plaintiff in its property so used, and the actual investment of The Astoria Light, Heat and Power Company, the East River Gas Company of Long Island City, and the Standard Gas Light Company in such property used by the plaintiff in the service of its consumers, as of December 31, 1923, was and is, at least the sum of $98,917,970.64, made up as follows:

Original cost of property used in plaintiff's gas business, as of June 1, 1923	$98,891,803 63
Net decrease June 1, 1923 to December 31, 1923, to used and useful property of the plaintiff	310,601 49
	$98,581,202 14

Net Additions, June 1, 1923 to December 31, 1923, to property of The Astoria Light, Heat & Power Company used by the plaintiff	336,768 50
	$98,917,970 64

97. I find the present value of the manufacturing plant, distributing system and other tangible property owned by the plaintiff and used and useful in its gas business as of June 1, 1923, inclusive of certain properties owned by the plaintiff and used jointly with other companies, based upon the unit prices of labor and material prevailing at that time and as of the time of the hearings before me, exclusive of working capital and of going value, was and is at least the sum of $90,047,110.61. Certain of said prop- [fol. 267] erty is used jointly with other companies of the transfer of gas system. I find the present value of that portion of such property owned by the plaintiff but devoted to the use of other companies as of June 1, 1923, included in the said present value of plaintiff's property the sum of $3,243,676.43.

98. I find the present value of the manufacturing plant, distributing system and other tangible property owned by the plaintiff used and useful in its gas business as of June 1, 1923, inclusive of working capital and going value was, as of June 1, 1923, at least the sum of $99,303,434.18, made up as follows:

Present value of tangible property as of June 1, 1923	$90,047,110 61
Less the portion thereof devoted to use of other companies as of June 1, 1923	3,243,676 43
	$86,803,434 18
Tangible property owned and used by plaintiff as of June 1, 1923	
Investment of working capital reasonably required as of June 1, 1923	3,500,000 00
Investment in going value as of June 1, 1923	9,000,000 00
Total	99,303,434 18

99. I find the present value of the portion of the manufacturing plant, distributing system and other tangible property owned by The Astoria Light, Heat & Power Company used by and useful to the plaintiff in its gas business as of June 1, 1923, based upon the unit prices of labor and material prevailing as of that time, and as of the time of the hearings before me, inclusive of working capital, but exclusive of any allowance for easements, franchises or going value, was and is at least the sum of $28,426,877.06.

100. I find the present value of the portion of the manufacturing plant, distributing system and other tangible [fol. 268] property owned by The East River Gas Company of Long Island City used by and useful to the plaintiff in its gas business as of June 1, 1923, based upon the unit prices of labor and material prevailing as of that time, and as of the time of the hearings before me, was and is at least the sum of $6,146,427.53.

101. I find the present value of the portion of the distributing system and other tangible property owned by The Standard Gas Light Company used by and useful to the plaintiff in its gas business as of June 1, 1923, based upon the unit prices of labor and material prevailing as of that time and as of the time of the hearings before me was and is at least the sum of $225,000.00.

102. I find the present value of the manufacturing plant, distributing system and other property used by the plaintiff in its gas business as of June 1, 1923, based upon the prices of material and labor prevailing at that time and as of the time of the hearings before me, including both the property owned by the plaintiff and used in its gas business and property of other companies devoted to the use of the plaintiff in the service of its consumers was and is at least the sum of $134,101,738.77, made up as follows:

Present Value of Property Used by the Plaintiff in Its Gas Business as of June 1, 1923

Property of Consolidated Gas Company	$99,303,434 18
Property of Astoria Light, Heat & Power Co.	28,426,877 06
Property of East River Gas Company of Long Island City	6,146,427 53
Property of the Standard Gas Light Company	225,000 00
Total	$134,101,738 77

103. After giving effect to the additions, extensions, improvements and withdrawals between June 1, 1923, and De- [fol. 269] cember 31, 1923, to the property of the plaintiff and of the other companies used by it in its gas business, I find that the value of such property as of December 31, 1923, was and is at least the sum of $129,760,683.77.

104. From all the facts appearing before me I find that the value of the property of the plaintiff and that of other companies used by it in its gas business as of June 1, 1923, was the sum of $134,101,738.77, and that the value of such property on December 31, 1923, was and is the sum of $129,760,683.77.

105. I find that the plaintiff was and is entitled to earn through rates chargeable by it for gas a fair return upon the amount of $134,101,738.77 as of June 1, 1923, and upon the amount of $129,760,683.77 as the value of the property owned by the plaintiff and other companies and used and useful in the gas business of the plaintiff as of December 31, 1923.

106. The plant, machinery and equipment owned by the plaintiff and used in its gas business and the plant, machinery and equipment owned by the affiliated gas companies used by the plaintiff in its gas business, have been and are maintained in a high state of repair and in excellent operating condition; proper repairs thereto and renewals and replacements thereof have been made, as and when required; and no diminution or loss in productive

capacity has been sustained; and such plant, machinery and equipment are now in as high a state of efficiency for the economical production of gas as if new.

107. The reasonable and proper rate of return upon the [fol. 270] present value of the plant, distributing system and other properties owned by the plaintiff and its affiliated gas companies, and used and useful in the plaintiff's gas business, I find to be not less than eight (8) per cent per annum. At no time since the enactment of Chapter 899 of the Laws of 1923 has the plaintiff earned in its gas business such return at the rate prescribed therein, of $1.00 per thousand cubic feet of gas sold, either upon the amount of the present value of its property or upon the amount of the minimum investment in such property.

108. The effect of the enforcement of Chapter 899 of the Laws of 1923 upon the operations of the plaintiff during the year 1922, computed on the basis of the elimination from the plaintiff's operating expenses of all return actually paid by the plaintiff upon the investment of affiliated gas companies in property devoted to the use of the plaintiff, and of adding such property of other companies to the rate base, would have been as follows:

[fol. 271] Year 1922

Excluding from Operating Expenses the Sums Actually Paid for Return on Investment in Other Companies' Property Used by the Plaintiff

	Amount	Per M cu. ft of gas sold
Cost of production	$11,275,062.99	$.5479
Cost of distribution, etc	6,253,852.47	.3039
Taxes	1,871,627.10	.0909
Retirement expense	720,310.40	.0350
Total operating expenses	$20,121,452.47	.9777
Miscellaneous operating revenue	1,916,924.48	.0931
Net operating expenses	18,204,527.99	.8846
Additional cost of supplying gas of statutory calorific content at least	648,279.00	.0315
Net cost of gas of statutory standard	18,852,806.99	.9161

		Amount	Per M cu. ft. of gas sold
Gross revenue from sales of gas at statutory rates:			
Commercial sales: 20,462,683,900 c. f. at $1.00 M. C. F.	$20,462,683.90		
Municipal sales: 117,601,700 c. f. at $.75 M. C. F.	88,201.27		
		20,550,885.17	.9986
Net income at statutory standard and rates applicable to the total property used by the plaintiff in its gas business.		$1,698,078.18	$.0825

The above stated net income would have yielded a return upon the property actually used by the plaintiff in its gas business, as of December 31, 1922, including both the property owned by it and the property of other companies used by it, of only 1.06 per cent upon the reproduction cost and only 1.72 per cent upon the actual investment in such property; for gas of the quality actually furnished it would have yielded a return on the investment of but 2.38 per cent and on the reproduction cost of but 1.47 per cent, and such amounts of return each would have been and are inadequate, unreasonably low, confiscatory of the plaintiff's property and violative of the constitutional rights of the plaintiff.

[fol. 272] 109. The effect of the enforcement of Chapter 899 of the Laws of 1923 upon the operations of the plaintiff during the year 1923, computed on the basis of the elimination from the plaintiff's operating expenses of all return actually paid by the plaintiff upon the investment of affiliated gas companies in property devoted to the use of the plaintiff, and of adding such property of other companies to the rate base, would have been as follows:

Year 1923

Excluding from Operating Expenses the Sums Actually Paid for Return on Investment in Property of Other Companies Used by the Plaintiff.

	Amount	Per M cu. ft. of gas sold
Cost of production	$12,099,219.79	$.5029
Cost of distribution, etc	6,641,004.46	.2761
Taxes	2,410,551.72	.1002
Retirement expense	842,019.30	.0350
Total operating expenses	$21,992,795.27	$.9142
Miscellaneous operating revenue	2,039,879.32	.0848
Net operating expenses	$19,952,915.95	$.8294

	Amount	Per M cu. ft. of gas sold
Additional cost of supplying gas of statutory calorific content at least	1,248,304.33	.0519
Net cost of gas for statutory standard	21,201,510.28	$.8843
Gross revenues from sales of gas at statutory rates:		
Commercial sales, 23,927,305,500 c. f. at $1.00 M c. f.	$23,927,305.50	$1.00
Municipal sales, 130,388,700 c. f. at $.75 M c. f.	97,791.53	.75
Total	$24,025,097.03	$.9986
Net income at statutory standard and rates applicable to the total property used by the plaintiff in its gas business	$2,823,586.75	$.1173

The above stated net income would have yielded a return upon the property actually used by the plaintiff, as of June 1, 1923, in its gas business, including both the property [fol. 273] owned by it and the property of other companies used by it of only 1.73 per cent, and as of December 31, 1923, of but 1.82 per cent upon the reproduction cost thereof; and only 2.85 per cent upon the actual investment in such property and only 2.10 per cent and 2.17 per cent respectively on the present value thereof on said dates. For gas of the quality actually furnished it would have yielded a return on the investment cost as of June 1, 1923, and on December 31, 1923, of but 4.11 per cent; on the reproduction cost of the property as of June 1, 1923, of but 2.50 per cent and as of December 31, 1923, of but 2.62 per cent; on the present value of such property as of June 1, 1923, of 3.03 per cent and as of December 31, 1923, of 3.13 per cent, and such amounts of return each would have been and are inadequate, unreasonably low, confiscatory of the plaintiff's property and violative of the constitutional rights of the plaintiff.

110. The effect of the enforcement of the $1.00 rate, as prescribed by the said statute, upon the operations of the plaintiff, for the year 1923, based upon the present cost of manufacture and distribution of the gas supplied to its consumers, computed upon the basis of the elimination from the plaintiff's operating expenses of all return actually paid by the plaintiff upon the property of the affiliated gas companies devoted to the use of the plaintiff, and of adding such property to the rate base, would be as follows:

[fol. 274] Present Cost

Excluding from Operating Expenses the Sums Actually Paid for Return on Investment in Property of Other Companies Used by the Plaintiff

	Amount	Per M cu. ft. of gas sold
Cost of production	$11,656,173.40	$.4845
Cost of distribution, etc	6,641,004.46	.2761
Taxes	2,410,551.72	.1002
Retirement expense	842,019.30	.0350
Total operating expenses	$21,549,748.88	$.8958
Miscellaneous operating revenue	2,039,879.32	.0848
Net operating expenses	$19,509,869.56	$.8110
Additional cost of supplying gas of statutory calorific content	1,207,696.25	.0502
Net cost of gas for statutory standard	$20,717,565.81	$.8612
Gross revenue from sales of gas at statutory rates	24,025,097.03	.9986
Net income at statutory standard and rates applicable to the total property used by the plaintiff in its gas business	$3,307,531.22	$.1374

The above stated net income would yield a return upon the property used by the complainant in its gas business as of June 1, 1923, and as of December 31, 1923, including both the property owned by it and the property of other companies used by it of only 3.34 per cent upon the actual investment in such property as of such date, and of only 2.03 per cent on the reproduction cost thereof as of June 1, 1923, and of only 2.13 per cent upon such cost as of December 31, 1923. On the present value of such property as of June 1, 1923, it would give a return of but 2.46 per cent as of June 1, 1923, and of 2.55 per cent as of December 31, 1923. On the basis of gas actually furnished it would give a return on the investment as of June 1, 1923, and as of December 31, 1923, of but 4.56 per cent; on the reproduction cost of June 1, 1923, of but 2.77 per cent and of December 31, 1923, 2.91 per cent; on the present value of the property [fol. 275] as of June 1, 1923, of but 3.37 per cent and as of December 31, 1923, 3.48 per cent, and such amounts of return each would be and are inadequate and unreasonably low, confiscatory of the plaintiff's property and violative of the constitutional rights of the plaintiff.

111. The effect of the enforcement of the rate of $1.00 per thousand cubic feet of gas sold, as prescribed by said statute, if applied to the actual operations of the plaintiff in its gas business for the year 1922, including in the plaintiff's operating expenses the sums paid for return on investment in property owned by other companies devoted to the plaintiff's use, would have been to deprive the plaintiff of any return whatever upon its own property used in its gas business, and would have imposed upon it a direct operating loss of at least $697,355.22, as more fully set forth, as follows:

Year 1922

Including in Operating Expenses the Sums Actually Paid for Return on Investment in Other Companies' Property Used by the Plaintiff

	Amount	Per M cu. ft. of gas sold
Net cost of gas of statutory standard	$18,852,806.99	$.9161
Amount of return on investment actually paid for use by the plaintiff of property of other companies	2,395,433.40	.1164
Total	$21,248,240.39	$1.0325
Revenue from gas sales at statutory rates	20,550,885.17	.9986
Operating loss to the plaintiff at statutory standard and rates, after payment of 8% return on minimum investment in property owned by other companies, devoted to plaintiff's use, but exclusive of any return upon its own property	$697,355.22	.0339
Operating loss to the plaintiff at statutory rates and quality of gas actually furnished after payment of 8% return on minimum investment in property owned by other companies devoted to the plaintiff's use, but exclusive of any return upon its own property	$49,076.22	.0024

[fol. 276] 112. The effect of the enforcement of the $1.00 rate per thousand cubic feet of gas sold, as prescribed by the said statute, if applied to the actual operations of the plaintiff in its gas business for the year 1923, including in the plaintiff's operating expenses the sums paid for the return on investment in property owned by other companies devoted to the plaintiff's use, would have been to allow the plaintiff a return upon its own property used in its gas business, after paying an 8% return upon the

minimum investment in property owned by other companies, devoted to the plaintiff's use, of only $601,746.50, as more fully set forth, as follows:

Year 1923

Including in Operating Expenses the Sums Actually Paid for Return on Investment in Other Companies' Property Used by the Plaintiff

	Amount	Per M cu. ft. of gas sold
Net cost of gas for statutory standard	$21,201,510.28	$.8813
Amount of return on investment actually paid for the use by the plaintiff of property of other companies	2,221,840.25	.0924
Total	$23,423,350.53	$.9737
Revenue from gas sales at statutory rates	24,025,097.03	.9986
Net income at statutory standard and rates, applicable to the plaintiff's own property, after payment of an 8% return on minimum investment in property owned by other companies, devoted to the plaintiff's use	601,746.50	.0249

The plaintiff's investment in its own property used in its gas business as of June 1, 1923, was the sum of $71,578,363.44, and as of December 31, 1923, $71,267,761.95. The reproduction cost of such property as of June 1, 1923, was [fol. 277] $122,898,715.11, and as of December 31, 1923, was $115,324,589.75. Its present value as of June 1, 1923, was $99,303,434.18, and as of December 31, 1923, $94,882,312.45.

The above stated net income would have yielded to the plaintiff a return upon its investment in its own property used in its gas business as of June 1, 1923, of only .83 per cent. and upon the reproduction cost of only .49 per cent. and upon the present value of .60 per cent. and as of December 31, 1923, on its investment of only .84 per cent.; on the reproduction cost of .52 per cent., and on the present value of .63 per cent. Upon the basis of the quality of gas actually furnished the net income would have been $1,850,340.83. Such net income would have yielded to the plaintiff a return upon its investment in its property used in its gas business as of June 1, 1923, of 2.58 per cent.; upon its reproduction cost of 1.50 per cent.; upon its present value of 1.86 per cent., and as of December 31, 1923, on its investment of but 2.59 per cent.; on its reproduction cost 1.60

per cent., and on its present of 1.95 per cent. All such above stated amounts each would have been and are inadequate, unreasonably low, confiscatory of the plaintiff's property and violative of the constitutional rights of the plaintiff.

113. The provisions of Chapter 899 of the Laws of 1923, prohibiting the plaintiff from furnishing, in the City of New York, gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, in conjunction with the provisions thereof prohibiting the plaintiff from charging a rate for gas per thousand cubic feet in excess of one dollar, requires the plaintiff to furnish gas of the standard [fol. 278] prescribed, at a rate therefor which does not afford reasonable compensation for the service rendered and a reasonable return upon the fair value of the property used and useful in rendering such service.

114. The provisions of Chapter 899 of the Laws of 1923 were specified and required by its terms to be and become effective immediately upon the signing of the measure by the Governor of the State of New York, and required the plaintiff forthwith to comply with the provisions thereof in respect to the thermal content of the gas delivered to consumers. In order that gas of the thermal content prescribed by the said provision of Chapter 899 of the Laws of 1923 might be furnished to the plaintiff's consumers under conditions assuring the safety of such supply, it would be necessary, before the plaintiff undertook to furnish gas conforming to such a standard, to have all the various gas appliances used by the plaintiff's consumers again changed and readjusted so as to adapt them to the use of gas conforming to such standard. Such appliances in use by the plaintiff's consumers more than 983,000. It would have been physically impossible to change and readjust the gas appliances used by the plaintiff's consumers in order to adapt them to the safe use of gas of such standard forthwith, and such work would necessarily have occupied a period of about nine months; and, if the plaintiff had attempted to comply with the requirements of the said provision and to furnish gas of such standard before such changes were made, the supplying of such gas would prob-

ably have resulted in injury to life and property. Such changes in the adjustment of gas appliances to adapt them to the use of gas of the standard prescribed by the said chap- [fol. 279] ter 899 would impose upon the plaintiff the expenditure of a sum largely in excess of the sum already spent (to wit, $196,000) in changes to adapt gas appliances to the use of gas of the standard prescribed by the said order of the said Commission, dated August 30, 1922, and the use of gas of the standard prescribed by the said Chapter 899 would, in many cases, require the purchase by consumers, and the substitution of new appliances, which would cost such consumers substantial sums of money. The plaintiff was and is entitled to a reasonable opportunity, to make or to have its consumers make such adjustment of or changes in the gas appliances as were necessary to adapt them to the consumption of gas of the standard prescribed by Chapter 899 of the Laws of 1923, and in so far as the provisions of the said Chapter 899 of the Laws of 1923 did not afford the plaintiff such an opportunity, the said statute was and is violative of the constitutional rights of the plaintiff to enjoy and use its property and manage and conduct its business. The plaintiff was entitled to a safe and adequate judicial review of the legality of Chapter 899 of the Laws of 1923, both in respect to the provisions relating to the rates fixed therein and in respect of the standard of gas prescribed thereby, and the plaintiff was and is entitled to have the operation and enforcement of the provision of Chapter 899 of the Laws of 1923 in so far as it prohibits the plaintiff from furnishing gas of a standard other than that prescribed therein judicially enjoined pending such a judicial review and until a reasonable opportunity had been afforded to it to comply with the requirements of said statute. Chapter 899 of the Laws of 1923, requiring the plaintiff forthwith upon the taking effect of [fol. 280] the statute to furnish gas of a minimum of 650 B. t. u., was and is an unlawful and unconstitutional exercise of legislative power, in the further respect that an immediate compliance was impossible and that compliance without a reasonable opportunity and a reasonable amount of time for readjusting or causing to be readjusted the gas appliances of its consumers would involve the most serious menace to life and property.

115. Ever since June 2, 1923, it has been, still is, and will continue to be, commercially impossible for the plaintiff to comply with the requirement of Chapter 899 that gas of not less than 650 British thermal units be furnished to the plaintiff's consumers, from and after the date of the taking effect of the said statute. Ever since June 2, 1923, it has been, still is, and will continue to be, an absolute physical impossibility for the plaintiff, under the practical conditions obtaining in different portions of its distribution territory, to comply with this requirement and physically impossible for the plaintiff to manufacture and distribute to its consumers gas which will not, on occasions, fall below 650 British thermal units per cubic foot under such actual conditions. To make it possible for the plaintiff to furnish to all of its consumers on its distributing system gas conforming to the standard prescribed by the said provision, it would be necessary for the plaintiff to manufacture gas of a much higher British thermal content than the minimum prescribed by the said provision; and the maximum British thermal content at which gas would have to go out from the plaintiff's plant in order that gas of not less than 650 British thermal units may be delivered at the point on the plaintiff's distributing system where the greatest variation [fol. 281] occurs from the thermal content of such gas as sent out from the plant, must determine the thermal content at which all the gas furnished to the plaintiff's consumers must be produced and sent out, to the end that at no point on the plaintiff's distributing system where gas may be measured under normal conditions of temperature and atmospheric pressure may the gas furnished fall below the statutory standard. The production and sending out of all the gas sold by the plaintiff at a thermal content adequate to maintain the maximum requirement of comparatively few points on its distributing system, would be commercially impracticable, wasteful of material and labor, preventive of adequate and efficient service to the great majority of the plaintiff's consumers, expensive beyond a point where any charge made to the plaintiff's consumers for gas service would be reasonable to them, and productive of no benefit to the plaintiff's consumers or to the plaintiff.

116. Ever since June 2, 1923, it has been, still is, and will continue to be, impossible for the plaintiff to produce, for

distribution to its consumers, gas of the maximum thermal content required to comply with Chapter 899 of the Laws of 1923, without producing wide variations in the heating content of the gas supplied and without a resulting unsatisfactory service. Gas of high heating content, such as that prescribed by the said statute, contains larger percentages of condensible hydro-carbons than gas of a lower heating value, such as that prescribed by the Commission's order of August 30, 1922, in Case No. 108, Even if gas of such high heating content were produced with a fair degree of uniformity at the plant, it would be unavoidably affected by changing temperature conditions in the holders [fol. 282] and street mains, resulting in variable and unsatisfactory service to the consumers of the plaintiff. The heat content prescribed by the said statute is exceptionally high; and gas supplied with such heat content, which had been subjected to such temperature changes beyond the control of the plaintiff, when applied to cooking utensils, incandescent lighting mantels, the interior of ranges and room heaters and all other heated surfaces, such as boiler tubes and water heater coils, would not be completely consumed, thereby causing such heated surfaces to become coated with an increasing deposit of carbon, and a large percentage of the efficiency of such gas would be lost and serious hazards to life and property created.

117. The provisions of Chapter 899 of the Laws of 1923 undertake or purport to require a standard of not less than 650 British thermal units per cubic foot to be maintained on every part of the distributing system of the plaintiff and throughout its territory, where the gas is measured under normal conditions of temperature and atmospheric pressure, but the said provisions nowhere define what are normal conditions of temperature and atmospheric pressure and the variety of conditions of temperature and atmospheric pressure which obtain at different times of the year and at different places on the distributing system of the plaintiff make it impossible to define or fix what are "normal conditions of temperature and atmospheric pressure," within the meaning of the said provision.

118. The provisions of Chapter 899 of the Laws of 1923, that a gas corporation engaged in the business of manu-

facturing, furnishing or selling illuminating gas in a city [fol. 283] containing a population of one million or over shall not charge or receive for gas furnished or sold in such city a sum per one thousand cubic feet in excess of One Dollar, nor furnish in such city gas of less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, are not separable. The rate fixed by Chapter 899 of the Laws of 1923 is One Dollar per thousand cubic feet for gas of the specified quality, and the requirement of a minimum thermal content is an integral part of the attempted limitation on the plaintiff's rates; and the whole provision is confiscatory, unconstitutional, discriminatory and void, for reasons hereinbefore set out.

119. The provisions of Chapter 899 of the Laws of 1923, in so far as it attempted to change the rate to be charged and the standard of gas to be furnished by the plaintiff in pursuance of the orders made by the Public Service Commission in its Cases Nos. 79, 79-B and its Case No. 108, August 30, 1922, operated to impair the obligation of a contract between the State of New York, acting by its duly delegated agent, to wit, the Public Service Commission, and the plaintiff, in contravention of the plaintiff's constitutional guaranties, and particularly of Section 10 of Article 1 of the Constitution of the United States.

120. The plaintiff has no adequate remedy except by an action in equity.

121. Various matters comprised within the issues referred to me by the order of July 24, 1923, as amended by the order of August 7, 1923, I have discussed in a separate opinion which is herewith submitted and made a part of this report. It is my intention that the facts and the conclusions re- [fol. 284] garding the law, set forth or referred to for reasons of convenience in that separate document, shall be deemed a part hereof, with the same force and effect as though they had been physically incorporated in this report.

I therefore recommend as follows:

1. That it be adjudged and decreed that a maximum rate of one dollar per thousand cubic feet of gas sold by the

plaintiff, in conjunction with or apart from the said standard of 650 British thermal units per cubic foot, is illegal and void, because in contravention of Section 10 of Article 1, and of the Fourteenth Amendment of the Constitution of the United States, and that the provisions of the said Chapter 480 of the Laws of 1910 of the State of New York, known as the Public Service Commission Law, as amended and supplemented, and of Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from charging or receiving for gas manufactured and sold in the Borough of Manhattan, a sum per one thousand cubic feet in excess of the rate of one dollar per one thousand cubic feet, in conjunction with or apart from the said standard, are each likewise illegal and void.

2. That it be adjudged and decreed that a standard of gas, required to be furnished by the plaintiff, of not less than 650 British thermal units per cubic foot, in conjunction with a rate not exceeding $1.00 per thousand cubic feet of gas, is likewise illegal and void; and the provisions of the said Chapter 480 of the Laws of 1910 as amended and supplemented and of Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, [fol. 285] measured under normal conditions of temperature and atmospheric pressure, in conjunction with the rate prescribed thereby, are likewise illegal and void.

3. That it be adjudged and decreed that the provisions of Chapter 480 of the Laws of 1910, as amended and supplemented, and of Chapter 899 of the Laws of 1923, in so far as they prohibited or prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, without affording the plaintiff an opportunity and a reasonable time within which to make, or to have its consumers make, such readjustment of and changes in the gas appliances of the consumers as might be necessary in order to adapt them for the safe and efficient use of gas of such standard and to protect the consuming public against the very obvious and serious dangers to human life and property, or in so far as they denied to the plaintiff a safe and adequate judicial review of the legality thereof without incurring the penalties provided by the said statutes, are likewise illegal and void.

4. That it be adjudged and decreed that the said Chapter 480 of the Laws of 1910, as amended and supplemented, or any other provisions of law, or any regulation prescribed thereunder, in so far as it prohibits the plaintiff from putting into effect forthwith a rate for gas distributed or sold by it less than that which will afford to it just compensation therefor, is likewise illegal and void.

5. That it be adjudged and decreed that the plaintiff has no adequate remedy at law for the injury which will result from the enforcement of said acts, and that such injury will be irreparable.

[fol. 286] 6. That it be adjudged and decreed that the plaintiff be granted a premanent injunction, issuing out of and under the seal of this Honorable Court, against the defendants and each of them, and their, and each of their successors in office, their deputies and attorneys, and their, and each of their successors, servants and employes, and any and every person acting or purporting to act under or by virtue of the authority of Chapter 480 of the Laws of the State of New York, of 1910, as amended and supplemented, or any other or different provisions of law:

(1) From in any way enforcing or attempting to enforce against the plaintiff a rate for gas furnished by the plaintiff to its general consumers of not more than $1.00 per thousand cubic feet of gas sold, under the provisions of the said Acts or otherwise;

(2) From in any way enforcing or attempting to enforce against the plaintiff the provisions of the said Acts, in so far as they prohibit the plaintiff from charging or receiving for gas furnished in the Borough of Manhattan a sum per one thousand cubic feet in excess of $1.00 in conjunction with or apart from the said standard of gas;

(3) From enforcing or attempting to enforce against the plaintiff a standard of gas furnished by the plaintiff of not less than 650 British thermal units per cubic foot, or the provisions of the said Acts in so far as they prohibit the plaintiff from furnishing a gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure;

[fol. 287] (4) From bringing any action or proceeding to enforce the said penalties against the plaintiff, or by mandamus or injunction or otherwise, to compel compliance by the plaintiff with the provisions of the said Acts, or any of them, relative to the said maximum rates or charges;

(5) From doing any act or thing interfering with the right or authority of the plaintiff forthwith to furnish gas of any standard which it may lawfully furnish and to charge or receive for gas furnished by it any rate which it may lawfully charge or receive, any provisions of the said Acts or of any regulations prescribed thereunder relative to the rate to be charged and received or to the standard of gas to be furnished by the plaintiff, to the contrary notwithstanding.

7. That it be adjudged and decreed that, at any time while the injunction herein granted remains in force, any party hereto or his or its successors or assigns, may apply by notice at the foot hereof, to vacate, modify or extend the foregoing injunction because of any change of circumstances since the entry hereof, or for any additional relief to which he or it may deem himself or itself entitled by reason of any acts or events occurring after the date of this decree.

8. That the plaintiff may have such other, further or different relief as to the Court may seem meet and the nature of the case may require.

Dated New York, January 15, 1925.

James G. Graham, Special Master.

[fol. 288] In United States District Court

[Title omitted]

Notice of Filing Plaintiff's Exceptions

Sirs: Please take notice that the within exceptions of the plaintiff to the Report and Opinion of the Special Master herein, dated and filed January 15, 1925, were this day filed

in the office of the Clerk of the United States District Court for the Southern District of New York.

Dated, New York, February 4, 1925.

Yours, etc., Shearman & Sterling, Solicitors for the Plaintiff, 55 Wall Street, Borough of Manhattan, City of New York.

To Honorable Charles G. Blakeslee, Solicitor for Defendants William A. Prendergast et al., Constituting the Public Service Commission of the State of New York; Honorable [fol. 289] John Holley Clark, Jr., Solicitor for Defendant Albert Ottinger, as Attorney-General of the State of New York.

[fol. 290] IN UNITED STATES DISTRICT COURT

[Title omitted]

PLAINTIFF'S EXCEPTIONS TO THE REPORT AND OPINION OF THE SPECIAL MASTER—February 4, 1925

Now comes the plaintiff, Consolidated Gas Company of New York, and excepts to the Report and Opinion dated and filed herein January 15, 1925, by Honorable James G. Graham, Special Master herein, in each and all of the following particulars, to-wit:

(1) The plaintiff excepts to the Special Master's failure to include and find, as a part of the reasonable and necessary operating expenses of the plaintiff as found in Find-[fol. 291] ings numbers "58," "59," "60," "64" and "65," and in his Opinion at printed pages 71 to 76 and 83 to 87, under the headings "Cost of Operation" and "Return," the actual cost to the plaintiff of each and every one of the following items:

Items Deducted from Plaintiff's 1922 Operating Expenses

Gas supply inspection	$96,096.09
Interest on consumers' deposits	97,823.80
Rate case expenses	30,855.54
Expenses of P. S. C. hearings	43,491.65

Renewals and replacements	176,378.81
Deduction of gross earnings tax to amount based on a dollar rate instead of rate collected in 1922	24,457.25
Excess dividends tax	28,368.23
One-third of real estate tax on Kingsbridge land	1,833.33
Real estate of corporations tax	334,965.00
Federal income tax	312,357.39
Interest on unpaid taxes	129,141.00

Items Deducted from Plaintiff's 1923 Operating Expenses

Gas supply inspection	100,101.06
Interest on consumers' deposits	94,032.42
Rate case expenses	86,458.06
Expenses of P. S. C. hearings	113.56
Renewals and replacements	53,960.53
Deduction of gross earnings tax, basing it on $1.00 rate instead of rate collected in 1923	12,856.63
Excess dividends tax	48,805.41
One-third of real estate tax on Kingsbridge land	1,826.66
Interest on unpaid taxes	115,042.57

(Pltf.'s Ex. Nos. 813, 816, 888, 889, 1017.)

[fol. 292] (2) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "64" and with his opinion at printed pages 72 to 74, that the net actual and reasonable cost of gas delivered to its consumers by the plaintiff, in cents per thousand cubic feet of gas sold, after eliminating therefrom all interest upon investment in both the property owned by the plaintiff and in the property of other companies devoted to the plaintiff's use (upon the basis of adding the property of other companies so used to the amount of property owned by the plaintiff and used and useful by it in its gas business, so as to ascertain and state the aggregate amount of property used in the service of the plaintiff's consumers, upon which they must pay a fair return in the rates paid by them), and after allocating to the respective items of operating expenses the cost of materials, labor, general expenses, taxes,

insurance, maintenance and the like, actually paid in the cost of gas purchased and in the payments for use of manufacturing capacity and distribution facilities of other companies, and after giving effect to miscellaneous operating revenue, such cost being exclusive of any return upon any property used in the plaintiff's gas business was and is as [fol. 293] follows:

	Year 1922	Year 1923
Cost of production	$.5479	$.5029
Cost of distribution, etc.	.3169	.2877
Taxes and interest thereon	.1313	.1076
Retirement expenses	.0436	.0373
Total reasonable cost	$1.0397	$.9355
Less miscellaneous operating revenue	.0954	.0872
Net reasonable cost	$ 9443	$ 8483

(Pltf.'s Ex. Nos. 888, 889.)

(3) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "65" and with his Opinion at printed page 75, that the present cost of manufacture and distribution of the gas supplied to its consumers by the plaintiff, based upon the actual conditions existing during the year 1923 and upon the quality of gas actually supplied during the year 1923, at prices of coal, coke, gas oil, and residuals, current as of May 1, 1924, and otherwise computed in the same manner as the cost of manufacture and distribution of gas set forth in the plaintiff's exception numbered "(2)", is as follows:

	Present cost
[fol. 294] Cost of production	$ 4845
Cost of distribution, etc	2877
Taxes and interest thereon	1076
Retirement expense	0373
Total present cost	$ 9171
Less miscellaneous operating Revenue	0872
Net present cost	$ 8299

(4) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "66" and with his Opinion at printed pages 72-73, that the total actual and reasonable cost to the plaintiff of gas delivered to its consumers during the years 1922 and 1923, in cents per thousand cubic feet of gas sold, after giving effect to miscellaneous operating revenue, for the quality of gas furnished in the respective years, exclusive of any return upon any of the plaintiff's own property used in its gas business, but inclusive of such sums as were actually paid by the plaintiff for the use of the property of other companies necessarily used in the service of the plaintiff's consumers, was, and is, as follows:

	Year 1922	Year 1923
[fol. 295] Cost of production	$ 6959	$ 6140
Cost of distribution, etc.	3282	2981
Taxes and interest thereon	0969	0806
Retirement expense	0350	0350
Total reasonable cost	$1 1560	$1 0277
Less miscellaneous operating revenue	0953	0871
Net reasonable cost	$1 0607	$ 9406

(Pltf.'s Ex. Nos. 813, 816.)

(5) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "67" and with his Opinion at printed pages 76-77, the net actual and reasonable cost of gas of the quality supplied to their consumers, in the respective years, by the companies forming the so-called Consolidated transfer-of-gas system, after eliminating all inter-company charges and all return upon property or investment actually paid by one company to the other for the use of property and/or facilities, and after giving effect to miscellaneous operating revenue, was and is as follows:

	Year 1922	Year 1923
[fol. 296] Cost of production	$ 5408	$ 5022
Cost of distribution, etc.	3081	2904
Taxes and interest thereon	1426	1369
Retirement expense	0352	0356
Total reasonable cost	$1 0267	$ 9651
Less miscellaneous operating revenue	1029	0965
Net reasonable cost	$ 9238	$ 8686

(Pltf.'s Ex. Nos. 891, 892.)

(6) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "68" and with his Opinion at printed pages 76-77, that the present cost of manufacture and distribution of the gas supplied to their consumers by the aforesaid system gas companies, based upon the actual conditions existing during the year 1923 and for the quality of gas actually supplied during the year 1923, at the current prices of coal, coke, gas oil, and residuals, after eliminating all inter-company charges and all return upon property or investment actually paid by one company to another for the use of property and/or facilities, and after giving effect to miscellaneous operat-
[fol. 297] ing revenue, is as follows:

	Present cost
Cost of production	$ 4835
Cost of distribution, etc	2904
Taxes and interest thereon	1369
Retirement expense	0356
Total present cost	$9464
Less miscellaneous operating revenue	0965
Net present cost	$ 8499

(Pltf.'s Ex. No. 1018.)

[fol. 298] (7) The plaintiff excepts to the Special Master's failure to include and find, as a part of the land at the Kingsbridge Holder Station, being lot 1 of Block 3236, used and useful in the plaintiff's gas business, as found in Finding

numbered "72" and in his Opinion at printed page 34, the whole of the area of such land instead of two-thirds thereof, and the whole of the value of such land instead of two-thirds thereof. (Testimony of witnesses Alrich and Huntley.)

(8) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "71," and with his Opinion at printed pages 37-39, that the fair and reasonable market value of land (unimproved) owned by the plaintiff and used and useful in its gas business was, as of June 1, 1923, and is, at least the sum of $13,959,150 (Testimony of witness Huntley); and, in connection with Finding numbered "77", and with his Opinion at printed page 39, that the fair and reasonable market value of the portion of land (unimproved) owned by The Astoria Light, Heat and Power Company but used by the plaintiff is $4,038,990.53. (Testimony of witness Huntley.)

(9) The plaintiff excepts to the failure of the Special Master to find, in connection with Finding numbered "81", and with his Opinion at printed pages 35-37, relating to the additions to the plaintiff's property, during the period from [fol. 299] June 1, 1923, to December 31, 1923, the whole cost of the Hunts Point property, amounting to $2,265,103. (Pltf.'s Ex. 887; Testimony of witness Woods.)

(10) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "78", and with his Opinion at printed pages 40-41, that the reproduction cost of the Astoria Tunnel, on a sub-contract basis, as of June 1, 1923, was $8,750,676.00. (Pltf.'s Ex. 836.)

(11) The plaintiff excepts to the Special Master's failure to find, in connection with Findings numbered "72", "73", "76", "80", "82", "84", "97", "98", "102", "103", "104", and "105", and with his Opinion at printed pages 61-63, that the reproduction cost of the labor and material entering into the construction of the street mains owned by the plaintiff, as of June 1, 1923, was $37,075,233., and of the services, was $5,557,284. (Pltf.'s Ex. Nos. 268, 270.)

(12) The plaintiff excepts to the Special Master's failure to find in connection with Finding numbered "72" and with corresponding effect upon Findings numbered "73",

"76", "80", "82", "84", "97", "98", "102", "103", "104", and "105", and with his Opinion at printed pages [fol. 300] 57-61 and 65-68, that the following items of undistributed structural costs, in the amounts respectively set opposite each item, necessarily formed a part of the manufacturing plant, distributing system, and other tangible property of the plaintiff, and of the reproduction cost and value of the plaintiff's property, as of June 1, 1923:

Omissions and Contingencies	$909,930
Organization and Development prior to Construction	6,600,000
Cost of Financing	6,900,000
Engineering, Superintendence and General Contractor's Expense and Profit	8,465,779
Interest during Construction	9,323,611
Taxes during Construction	851,089
Administrative, Legal & Miscellaneous General Expense during Construction	1,839,679

(Pltf.'s Ex. No. 856.)

[fol. 301] (13) The plaintiff excepts to the Special Master's failure to find the following items of undistributed structural costs, in the amounts respectively set opposite each item, necessarily formed a part of the manufacturing plant, distributing system, and other tangible property of the affiliated gas companies named below, a portion of which was devoted to the use of the plaintiff's consumers, and formed a part of the reproduction cost and value of such property as of June 1, 1923:

The Astoria Light, Heat and Power Company

Omissions and Contingencies	$958,385
Organization and Development prior to Construction	2,304,000
Cost of Financing	2,422,500
Engineering, Superintendence and General Contractor's Expense and Profit	3,447,827
Interest during Construction	3,672,705
Taxes during Construction	453,810
Administrative, Legal and Misc. General Expenses during Construction	749,239

(Pltf.'s Ex. 866-X.)

[fol. 302] The Standard Gas Light Company of the City of New York

48-inch Harlem River Main

Organization and Development prior to Construction	$22,000
Cost of Financing	23,500
Engineering, Superintendence, and General Contractor's Expense and Profit	43,918
Interest during Construction	34,824
Administrative, Legal and Miscellaneous General Expense during Construction	9,544

(Pltf.'s Ex. 868.)

[fol. 303] The Standard Gas Light Company of the City of New York

62nd Street Boiler and Governor House

Omissions and Contingencies	$6,476
Organization and Development prior to Construction	17,000
Cost of Financing	18,000
Engineering, Superintendence, and General Contractor's Expense and Profit	27,451
Interest during Construction	30,606
Administrative, Legal, and Misc. General Expense during Construction	5,965
Taxes during Construction	2,055

(Pltf.'s Ex. No. 868.)

[fol. 304] The East River Gas Company of Long Island City

48-inch and 60-inch Mains

Organization and Development Prior to Construction	$70,000
Cost of Financing	74,000
Engineering, Superintendence, and General Contractor's Expense and Profit	138,380
Interest during Construction	109,833
Administrative, Legal and Misc. General Expense during Construction	30,071

(Pltf.'s Ex. No. 868.)

The Astoria Tunnel and Ravenswood Tunnel

Organization and Development Prior to Construction	$735,000
Cost of Financing	773,000
Engineering, Superintendence and General Contractor's Expense and Profit	292,659
Interest during Construction	2,017,440
Taxes during construction	149,158
Administrative, Legal and Misc. General Expense during Construction	286,154

(Pltf.'s Ex. No. 868.)

[fol. 305] (14) The plaintiff excepts to that part of the Special Master's Findings numbered "72" and "77", and of his Opinion at printed page 83, wherein he deducted from the cost of reproducing new the property owned and used by the plaintiff in the gas business, as of June 1, 1923, the amount of $531,292.50 for expenditures necessary to put the property in condition as if now, and wherein he deducted from the cost of reproducing new the portion of the manufacturing plant and other tangible property owned by the Astoria Light, Heat and Power Company, used by and useful to the plaintiff in its gas business, as of June 1, 1923, the amount of $468,392.19, as the percentage of the expenditures necessary to put the buildings and

plants of the latter company in condition when new. (Pltf.'s Ex. Nos. 839, 859, 865, 867 and 870.)

(15) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "72", and with his Opinion at printed pages 58-59, the cost to reproduce, and the value of, the manufacturing plant, distributing system and other tangible property owned by the plaintiff and used and useful in its gas business, as of June 1, 1923, [fol. 306] inclusive of certain property owned by the plaintiff and used jointly with other companies, based upon the unit prices of labor and material prevailing as of that time and as of the time of the hearings before the Special Master, exclusive of working capital and going value, was, and is, at least the sum of $140,534,251.00. (Pltf.'s Ex. 856.)

(16) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "73", and with his Opinion at printed pages 58 and 59, that the cost to reproduce that portion of the property owned by the plaintiff which is jointly used with other companies on the transfer-of-gas system, such property including the 48-inch connecting main in Manhattan and The Bronx, the 48-inch transfer main, and the 36-inch distributing main in The Bronx, the Kingsbridge holder station, and certain small mains in The Bronx, but devoted to the use of other companies, as of June 1, 1923, was, and is, the sum of $3,790,053.17. (Pltf.'s Ex. No. 890.)

[fol. 307] (17) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "74" and with his Opinion at printed pages 43-46, that the average working capital actually and reasonably employed by the plaintiff in its gas business, amounted, during the year 1922, to $6,775,000.00, and during the year 1923, to $7,200,000.00; that the amount of working capital reasonably and necessarily required in its gas business was at least $6,900,000.

(Pltf.'s Ex. Nos. 826, 827, 856.)

(18) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "77" and with his Opinion at printed pages 43-46, that the amount of working capital reasonably and necessarily required of

the Astoria Light, Heat and Power Company in its gas business, was $3,400,000.

(Pltf.'s Ex. No. 866-X.)

(19) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "75" and with his opinion at printed pages 46-51, that the reasonable and necessary going value of the plaintiff in its gas business as of June 1, 1923, and as of the present time, was and is at least the sum of $25,000,000. (Testimony of Witness Addicks.)

[fol. 308] (20) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "76" and with his Opinion at printed pages 56-57, that the cost to reproduce, and the value of, the manufacturing plant, distributing system and other tangible property owned by the plaintiff, used and useful in its gas business, as of June 1, 1923, inclusive of working capital and going value, was as of June 1, 1923, at least the sum of $168,644,197.83, made up as follows:

Reproduction cost of Tangible Property as of June 1, 1923	$140,534,251.00
Less the portion thereof devoted to use of other companies, as of June 1, 1923	3,790,053.17
Tangible Property owned and used by plaintiff as of June 1, 1923	$136,744,197.83
Working Capital, reasonably required as of June 1, 1923	6,900,000.00
Going Value, as of June 1, 1923	25,000,000.00
	$168,644,197.83

(Pltf.'s Ex. Nos. 826, 827, 856, 866-X, 890, testimony of Witness Addicks.)

[fol. 309] (21) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "77" and with his Opinion at printed page 59, that the cost to reproduce, and value of, the manufacturing plant, distributing system and other tangible property of

The Astoria Light, Heat and Power Company used in its gas business, as of June 1, 1923, was at least the sum of $48,513,148.00 (Pltf.'s Ex. No. 866-X), of which sum, property costing to reproduce and having the value of $37,539,809.82 was devoted, as of June 1, 1923, to the use of the plaintiff in its gas business.

(Pltf.'s Ex. Nos. 866-X, 873-X, 890.)

(22) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "78" and with his Opinion at printed page 59, that the reproduction cost and value as of June 1, 1923, of the property used in the service of the plaintiff's consumers, but owned by The East River Gas Company of Long Island City, was and is at least the sum of $9,581,394.96.

(Pltf.'s Ex. Nos. 868, 873-X, 890.)

[fol. 310] (23) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "79" and with his opinion at printed page 60, that the reproduction cost and value as of June 1, 1923, of the property owned by The Standard Gas Light Company but used by the plaintiff in the service of its consumers was and is at least the sum of $387,622.70.

(Pltf.'s Ex. Nos. 868, 873-X, 890.)

(24) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "80" and with his opinion at printed page 60, that the cost to reproduce, and the value of, the manufacturing plant and distributing system and other property used by the plaintiff in its gas business, as of June 1, 1923, including both the property owned by the plaintiff and used in its gas business, and the property of other companies devoted to the use of the plaintiff in the service of its consumers, was and is at least the sum of $216,153,025.31, consisting in summary of the following:

[fol. 311] Value of Property Used by the Plaintiff in its Gas Business as of June 1, 1923

Property of Consolidated Gas Co., Finding No. 82	$168,644,197 83
Property of The Astoria Light, Heat & Power Co.	37,539,809.82
Property of The Standard Gas Light Co.	387,622.70
Property of The East River Gas Company of Long Island City	9,581,394.96
Present value of the total property used by the plaintiff in its gas business as of June 1, 1923	$216,153,025.31

(See Pltf.'s Exceptions numbered 21 to 23, supra.)

(25) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "81" and with his opinion at printed page 60, that the net decrease in property during the period from June 1, 1923, to December 31, 1923, applicable to the reproduction cost and value of the plaintiff's used and useful property, did not exceed $6,522,085.53. (Pltf.'s Ex. No. 887.)

[fol. 312] (26) The plaintiff excepts to the Special Master's refusal to find, as stated in his opinion at printed page 93 thereof under the caption "Deficiency in Earnings," and to his rulings upon the trial excluding evidence tending to show, that the unamortized deficiency in the earnings of the plaintiff from at least January 1, 1917, to December 31, 1921, inclusive, due to the failure of the rates charged by the plaintiff, as limited by statute or public authority, to yield sufficient revenue to provide a reasonable return upon the value of the plaintiff's property, constitutes a proper element of the plaintiff's property upon which it is entitled to earn a return, and that such deficiency in earnings, upon the reproduction cost of the plaintiff's used and useful property as of June 1, 1923, amounted to at least $53,744,481.85; upon the like reproduction cost, but taking into account cumulatively the annual deficiency in earnings, amounted to at least $62,902,827.98; upon the ac-

tual investment of the plaintiff in its property used and useful in the gas business amounted to at least $24,287,447.81, and upon the like investment, but taking into account cumulatively the annual deficiency in earnings, amounted to at least $28,340,295.15. (Pltf.'s Ex. No. 879 for Id.)

[fol. 313] (27) The plaintiff excepts to the Special Master's failure to find, in connection with Findings numbered "89," "92," "94" and "96," and with his Opinion at printed page 52, that the original cost to the plaintiff of its property used and useful in its gas business as of June 1, 1923, as shown by its books of account, exclusive of expenditures made but not charged to fixed capital for interest during construction, engineering, superintendence, and other undistributable structural costs, and exclusive of working capital and going value, was at least the sum of $59,158,363.44. (Pltf.'s Ex. Nos. 820-828.)

(28) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "90," and with his Opinion at printed pages 52-53, that the original cost to The Astoria Light, Heat and Power Company of the portion of its property used and useful in its gas business as of June 1, 1923, as shown by its books of account, exclusive of working capital, was and is at least the sum of $26,136,953.16, and that the actual average investment during the year 1923 of The Astoria Light, Heat and Power Company in the working capital reasonably required for the conduct of its gas business was at least the sum [fol. 314] of $3,280,000, and that, of such investment, the actual investment in that portion devoted to the use of the plaintiff in its gas business amounted to $23,555,454.33. (Pltf.'s Ex. Nos. 829-831.)

(29) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "92," and with his Opinion at printed page 53, that the original cost of the manufacturing plant, distributing system, and other tangible property actually used by the plaintiff in its gas business as of June 1, 1923, including the investment of the plaintiff in its property so used and the investment of The Astoria Light, Heat and Power Company, The Standard

Gas Light Company, and The East River Gas Company of Long Island City in the respective properties owned by those companies and devoted to the use of the plaintiff in the service of its consumers, inclusive of going value, was at least the sum of $118,596,012.10. (See Pltf.'s Exceptions 17, 19, 27, 29 Supra.)

(30) The plaintiff excepts to the Special Master's failure to find, in connection with Finding numbered "93," and with his Opinion at printed pages 53-54, that during the period from June 1, 1923, to December 31, 1923, the net additions to the original cost of the plaintiff's gas prop-
[fol. 315] erty amounted to $1,491,447.53 (Pltf.'s Ex. No. 883).

(31) The plaintiff excepts to the Special Master's failure to find, in connection with Findings numbered "108", "109" and "110", and with his Opinion at printed pages 83-86, that the effect of the enforcement of the rate and standard prescribed by Chapter 899 of the Laws of 1923, upon the operations of the plaintiff during the year 1922, excluding from operating expenses the sums actually paid for return on investment in other companies' property used by the plaintiff, and after allocating to the respective items of operating expenses the cost of materials, labor, general expenses, taxes, insurance and the like actually paid in the cost of gas purchased and in the payments made for use of property of other companies, would have been to yield a net income applicable to the total property used by the plaintiff in its gas business of $469,489.87, or $.0228 per thousand cubic feet of gas sold (Pltf.'s Ex. No. 889); that such net income would have yielded a return upon the property actually used by the plaintiff in its gas business as of December 31, 1922, including both the property owned by it and the property of other companies used by it, of only 0.22 per cent. upon the present value and only 0.40 per cent. upon actual investment in such property; that the like effect upon the operations of the plain-
[fol. 316] tiff during the year 1923 would have been to yield a net income applicable to the total property used by the plaintiff in its gas business of $2,369,028.59, or $.0984 per thousand cubic feet of gas sold (Pltf.'s Ex. No. 888), and such net income would have yielded a return upon the

property actually used by the plaintiff, as of December 31, 1923, in its gas business, including both the property owned by it and the property of other companies used by it, of only 1.13 per cent. upon the present value, and of only 1.97 per cent. upon the actual investment in such property; and that the like effect of such enforcement upon the operations of the plaintiff, based upon the present cost of manufacture and distribution of the gas supplied to its consumers, would have been to yield a net income applicable to the total property used by the plaintiff in its gas business of $2,852,973.06, or $.1185 per thousand cubic feet of gas sold (Pltf.'s Ex. No. 1017), and such net income would have yielded a return upon the property actually used by the plaintiff in its gas business as of December 31, 1923, including both the property owned by it and the property of other companies used by it, of only 1.36 per cent. upon the present value, and only 2.37 per cent. upon the actual investment in such property.

[fol. 317] (32) The plaintiff excepts to the Special Master's failure to find, in connection with Findings numbered "111" and "112" and with his opinion at printed pages 83-86, that the effect of the enforcement of the rate and standard prescribed by Chapter 899 of the Laws of 1923, if applied to the actual operations of the plaintiff in its gas business for the year 1922 (including in operating expenses the sums actually paid for return on investment in other companies' property used by the plaintiff) would have been to deprive the plaintiff of any return whatever upon the property used and useful in its gas business and would have imposed upon it a direct operating loss of at least $1,925,943.53 (Pltf.'s Ex. No. 813), and that the like effect of the enforcement of the said rate and standard, if applied to the actual operations of the plaintiff in its gas business for the year 1923, would have been, upon the same basis, to yield a net income applicable to the property owned by the plaintiff and used in its gas business of $147,138.34, or $.0061 per thousand cubic feet of gas sold (Pltf.'s Ex. No. 816).

The plaintiff further excepts to the Special Master's failure to find that the above-stated net income would have yielded a return upon the property of the plaintiff used and useful in its gas business, as of December 31, 1923, of

[fol. 318] only 0.09 per cent. upon the present value of, and only 0.16 per cent. upon the actual investment in, such property.

(33) The plaintiff excepts to the Special Master's failure to find, in connection with his opinion at printed pages 76-77 relating to the operations of the Consolidated System Companies, that the effect of the enforcement of the rate and standard prescribed by Chapter 899 of the Laws of 1923, if applied to their actual gas operations for the year 1922, after eliminating therefrom all inter-company charges, and excluding all return on investment actually paid by one gas company to another for the use of property and/or facilities, would have been to reduce the net income applicable to the total used and useful properties of the said companies to $1,458,674.93, or $.0432 per thousand cubic feet of gas sold (Pltf.'s Ex. No. 892), and such net income would have yielded a return of only 0.80 per cent. upon the minimum investment in the property of the said System Companies used and useful in the gas business as of December 31, 1922; that the like effect of the enforcement of the said rate and standard provisions upon the operations of the Consolidated System Companies, if applied to their actual gas operations for the year 1923, would have [fol. 319] been to reduce the net income to $2,911,325.72, or $.0780 per thousand cubic feet of gas sold (Pltf.'s Ex. No. 891), and such net income would have yielded a return of only 1.56 per cent. upon the minimum investment in the property of the said System Companies used and useful in the gas business as of December 31, 1923, and that the like effect of the enforcement of the said rate and standard upon the operations of the Consolidated System Companies, based on the present cost of manufacture and distribution of the gas supplied by such companies would have been to reduce the net income applicable to the total used and useful properties of the said companies to $3,673,605.75, or $.0984 per thousand cubic feet of gas sold (Pltf.'s Ex. No. 1018), and the above-stated net income would have yielded a return of but 1.97 per cent. upon the minimum investment as of December 31, 1923, in the property of the said System Companies used and useful in the gas business.

[fol. 320] (34) The plaintiff excepts to the Special Master's failure to find that the provisions of Chapter 899 of

the Laws of 1923, prohibiting the furnishing within a city of more than one million inhabitants of gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, are arbitrary, oppressive, unreasonable and unduly discriminatory, in that such prohibition is imposed against the plaintiff and is not imposed against other gas companies engaged in the production and distribution of gas in other cities, including cities of the first class, and in other parts of the State of New York outside of the City of New York, under substantially similar conditions to those under which the plaintiff manufactures and distributes gas; the standard for gas furnished by gas corporations outside of the City of New York being that prescribed by the Public Service Commission and the same as that which was prescribed by the said Commission for the plaintiff and other gas corporations furnishing gas within the City of New York. (Complaint, par. XLIII.)

[fol. 321] (35) The plaintiff excepts to the Special Master's failure to find that the provisions of Chapter 899 of the Laws of 1923 and of the Public Service Commission Law (Chapter 480 of the Laws of 1910), as thus supplemented and amended by Chapter 134 of the Laws of 1921 and by Chapter 899 of the Laws of 1923, are arbitrary, oppressive, unreasonable and unduly discriminatory, and are not a valid or lawful exercise of the police power or regulatory power of the State of New York, in that the provisions of the Public Service Commission Law as thus amended confer power upon the Commission to reduce the rates chargeable by the plaintiff below one dollar per thousand cubic feet of gas, upon the complaint of others than the plaintiff, but prohibit the said Commission from increasing such rate for gas above one dollar per thousand cubic feet, although in respect to other gas corporations in the State of New York subject to the jurisdiction of the said Commission and producing and distributing gas under substantially similar circumstances as those under which the plaintiff operates, the said Commission is given power and authority to prescribe a rate for gas in excess of that [fols. 322 & 323] fixed by statute and in excess of one dol-

lar, upon the complaint or application of any of such other gas companies. (Complaint, par. XLIV.)

Dated New York, February 4, 1925.

Shearman & Sterling, Solicitors for Plaintiff, 55 Wall Street, Borough of Manhattan, City of New York.

[fol. 324] In United States District Court

[Title omitted]

Notice of Filing Defendant Ottinger's Exceptions

Sirs: Please take notice that within is a copy of the Exceptions of the defendant Albert Ottinger, as Attorney-General of the State of New York, to the Report and Opinion of Mr. James G. Graham, Special Master in this action, which exceptions were this day duly filed and entered in the office of the clerk of the United States District Court for the Southern District of New York.

Dated New York, February 4th, 1925.

Yours, etc., Albert Ottinger, Attorney-General of the State of New York. Office & P. O. address: Capitol Albany, N. Y. John Holley Clark, Jr., Solicitor for Defendant Albert Ottinger, as Attorney-General of the State of New York, #49 Chambers St., Borough of Manhattan, New York City, N. Y.

To Shearman & Sterling, Esqs., Solicitors for Plaintiff. Office & P. O. Address: 55 Wall Street, New York City, N. Y.

[fol. 325] In United States District Court

[Title omitted]

Defendant Ottinger's Exceptions to Report and Opinion of Special Master—February 4, 1925

Now comes the defendant Albert Ottinger, as Attorney-General of the State of New York, and excepts to the Findings of Fact and Conclusions of Law filed herein by

James G. Graham, Special Master herein, in the following particulars, to wit:

1. The defendant excepts to the Finding marked "8" of the Master's report insofar as it finds that:

"As of June 1, 1923, the plaintiff owned and used two coal-gas plants, known as the 14th Street and the 42nd Street Stations,"

on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof, and that said coal-gas plants were not in actual use by the plaintiff company for some years prior to June 1, 1923; furthermore, the defendant excepts to that portion of the Master's Finding marked "8" wherein it is stated:

[fol. 326] "During October, 1923, the plaintiff sold the land upon which these stations stood and proceeded to dismantle the properties, relying upon the added manufacturing capacity of the 21st Street Station, then nearing completion, to provide in their stead the necessary manufacturing capacity in the Borough of Manhattan,"

upon the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof; that the sale of the land herein mentioned and the dismantling of the properties was not predicated upon a reliance upon the added manufacturing capacity of the 21st Street Station. It was in fact a profitable real estate transaction, said properties having been held for such time as the real estate market made it expedient and profitable to dispose of the same.

2. The defendant excepts to the Finding marked "10" of the Master's report on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof. Furthermore, that only part of the Hester Street and the 15th Street properties were used by the plaintiff company. Furthermore, the defendant excepts to that portion of the Finding marked "10" which states that "numerous other parcels of land and buildings occupied and used in the gas business by the various departments of the company," on the ground the same

is so indefinite and uncertain as to make it impossibe to ascertain and determine what is included therein.

3. The defendant excepts to the Finding marked "11" of the Master's report on the ground that, insofar as services are concerned, the Finding is not supported by the evidence, is contrary to the evidence and against the weight of evidence, the evidence indicating that the con-[fol. 327] sumers owned a large portion of the services and that the extent of the said ownership was not properly proved so that the Master could find the figures set forth in the Finding marked "11" as to services.

4. The defendant excepts to the Finding marked "12" of the Master's report on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof; and on the further ground that the evidence did not properly establish the reasonable and necessary reserves of the plaintiff company and its various subsidiaries; that it is impossible because of the inter-company relationships to segregate the reserve needs of one from the needs of the other or the parent plaintiff company; that the reserve needs of one are practically the reserve needs of all, and that the requirements of the plaintiff company cannot be allocated in this respect from the needs of the subsidiary companies. Furthermore, the defendant excepts to the figures and computations contained in the aforesaid Finding marked "12" for the reasons hereinbefore set forth; and for the further reason that the 14th Street and the 42nd Street Stations were improperly included and considered in said computation. Furthermore, the defendant excepts to that portion of said Finding marked "12" which finds that to the extent that one company uses the plant capacity of another, compensation is made for the use of the necessary investment. Furthermore, the defendant excepts to that portion which states—

"For the purpose of fixing the carrying charge upon the investment in manufacturing and holder plants and other property devoted to the use of others, an investigation was made by Mr. George E. Woods, chief engineer of the plaintiff, in behalf of all of the gas companies affiliated with the [fol. 328] Consolidated Gas Company system, who embodied

his opinion and recommendation in written reports, which were carefully examined by the officers and directors of the interested companies and were approved and adopted by them,"

on the ground that the same is not supported by the evidence and is contrary to the weight thereof; that due to the System relationship of the parent plaintiff company and its subsidiaries, it was and is impossible to arrive at any fair and reasonable figure which would indicate the extent that one company uses the plant capacity of another, or any reasonable and fair compensation to be made for the use of the necessary investment. It has been the purpose of the engineers of the plaintiff company to charge a greater amount to the plaintiff parent company than is fair and reasonable, and the reports of the engineers and officers of the plaintiff company have been designed to place the burden on the System on the plaintiff parent company. Furthermore, the defendant excepts to that portion of the Finding marked "12" of the Master's report which finds that if the plant of each company were isolated from the plants of the other, each would require a reserve capacity much in excess of that provided by the System as a whole, entailing a capacity by each company much greater than now required by it, on the ground that the same is not supported by the evidence, is against the weight thereof and is wholly immaterial, setting forth conditions which do and did not exist during the period in litigation herein.

[fol. 329] 5. The defendant excepts to the Finding marked "15" of the Master's report which finds in substance that the books of account of the plaintiff company were kept in accordance with the rules and regulations of the Public Service Commission and that said books, accounts and records accurately set forth the rates, outlays and other facts therein undertaken to be shown, on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof.

6. The defendant excepts to the Finding marked "32" of the Master's report insofar as it finds that the Public Service Commission Law and the provisions thereof in relation to the rates charged for gas, &c., "were under-

taken to be amended by the insertion of the following new section: 67a," on the ground that said Public Service Commission Law was so amended and the phrase "undertaken to be amended" is therefore not a proper finding.

7. The defendant excepts to the Finding marked "33" of the Master's report on the ground that while the Constitution of the State of New York classifies cities of the State, there is nothing contained therein which restricts the legislature of the State of New York from enacting legislation for cities containing a population of a million or over; or more specifically, from enacting such legislation as is contained in chapter 899 of the laws of 1923 of the State of New York entitled:

"An Act to amend the Public Service Commission Law, in relation to the charge for illuminating gas in cities con-
[fol. 330] taining a population of 1,000,000 or over."

8. The defendant excepts to the Finding marked "34" of the Master's report wherein it is found that chapter 899 of the laws of 1923 restricted the Public Service Commission from prescribing, authorizing, allowing or fixing for plaintiff or other gas companies of the State of New York—

"a rate in excess of one dollar per thousand cubic feet for gas of not less than 650 British thermal units per cubic feet, measured under normal conditions of temperature and atmospheric pressure,"

upon the ground that the same is a conclusion of law misinterpreting the Public Service Commission Law, as amended by Chapter 899 of the laws of 1923.

9. The defendant excepts to the Finding marked "35" of the Master's report upon the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof; and furthermore, that only a small percentage of the outstanding capital stock of the plaintiff, as therein found, represents an investment by the plaintiff in the gas business; that the said capital stock was issued by the plaintiff company for the purchase, maintenance, etc., of the Edison Company supplying electricity in the city of New York, and for the purchase,

maintenance, etc., of certain gas companies some included others not included in the so-called Consolidated System; and therefore the figures set forth in Finding marked "35" do not in any wise represent the capital of the plaintiff company invested in its gas business.

[fol. 331] 10. The defendant excepts to the Finding marked "36" of the Master's report insofar as it finds that "proofs" were offered as to operating expenses, actual cost of manufacture and distribution, investment by the plaintiff in property owned and used by it in the gas business, &c. The defendant contends that while evidence as to these matters may have been presented, such evidence did not go to the extent of becoming "proof."

11. The defendant excepts to the Finding marked "37" of the Master's report in so far as it finds that:

"Prior to October, 1922, the plaintiff supplied gas conforming to the 22-candle power standard prescribed by Chapter 125 of the laws of 1906."

on the ground that the same is not supported by the evidence, is contrary to the evidence and is against the weight thereof; and furthermore, said Finding marked "37" is immaterial.

12. The defendant excepts to the Finding marked "42" of the Master's report which attempts to find the necessary and reasonable cost to the plaintiff of the generator fuel and boiler fuel, inclusive of the expense of labor, cartage, &c., in handling such fuel used by it in the manufacture of water gas by the plaintiff during the years 1922 and 1923, and also such cost of generator fuel and boiler fuel used in the manufacture of water gas made and purchased by plaintiff, on the ground that the figures therein found are unreasonable and excessive, are not supported by the evi- [fol. 332] dence, are contrary to the evidence and against the weight thereof.

13. The defendant excepts to the Finding marked "44" of the Master's report, wherein it is found that:

"For the manufacture of water gas of a delivered content of not less than 650 British thermal units per cubic feet, as prescribed by Chapter 899 of the Laws of 1923, there

would be required, under the conditions of manufacture and distribution existing in the plaintiff's gas business, at least 4.7 gallons of gas oil per thousand cubic feet of gas made,"

on the ground that the same is not supported by the evidence and is against the weight of evidence; and furthermore, that it is impossible to ascertain what calorific content is necessary at the plant in order to furnish 650 British thermal units per M cubic feet to each and every consumer; and on the further ground that it is impossible to ascertain what sort of gas would be produced if 4.7 gallons of gas oil per M cubic feet were used in the manufacture of gas by the plaintiff.

14. The defendant excepts to the Finding marked "48" of the Master's report wherein it is found that:

"During the year 1922, under the prices and rates of pay then in force, the cost of gas making labor in the plants of the plaintiff was 3.49 cents, of repair labor and material 4.44 cents, and miscellaneous works expense 1.03 cents per thousand cubic feet of gas made. During the year 1923, under the prices and rates of pay then in force, the cost of gas making labor was 3.83 cents, of repair labor and material 4.42 cents, and miscellaneous works expense 1.06 cents [fol. 333] per thousand cubic feet of gas made. The cost of such items in the manufacture of water gas made and purchased by the plaintiff during the year 1922, was, for gas making labor 3.23 cents, for repair labor and material 3.98, for electric power plant operating 0.21 cents, and for miscellaneous works expense one cent per thousand cubic feet of gas made. During the year 1923, under the prices and rates of pay then prevailing, such cost was, for gas making labor 3.29 cents, for repair labor and material 3.63 cents, for electric power plant operating 0.21 cents, and for miscellaneous works expense one cent per thousand cubic feet of gas made,"

on the ground that the prices, rates and costs, etc., therein found are unreasonable and excessive and not supported by the evidence, contrary to the evidence and against the weight thereof.

15. The defendant excepts to the Finding marked "49" of the Master's report which finds that the plaintiff "necessarily and reasonably purchased, to meet the demands of its consumers," certain quantities of gas from various gas companies during the years 1922 and 1923, on the ground that the evidence does not support the finding therein contained and that said findings are contrary to the evidence and the weight thereof; furthermore, the defendant excepts to that portion of Finding marked "49" which reads as follows:

"For the purpose of this suit, I have found the cost to the plaintiff of the production and distribution of gas, as hereinafter more specifically stated, applicable to the total quantity of gas required to meet the demands of the plaintiff's consumers, without regard to the fact that such gas may have been made in part in the plaintiff's own plants or purchased in part from its affiliated companies, and have included in the several items of the plaintiff's operating expenses only such elements of actual cost of labor, material and expense, as would have been included in the respective [fol. 334] items if all of the gas reasonably required by the plaintiff to supply the demands of its consumers were manufactured at its own plants,"

on the ground that this portion of said Finding "49" is not supported by the evidence, is contrary to the evidence and is against the weight thereof; and furthermore, is not in accordance with the other Findings of Fact of the Special Master, and takes as a standard for fixing the rate for gas the higher cost of plaintiff's own plants instead of the cost at its modern and more efficient plant, the Astoria Light, Heat & Power Company.

16. The defendant excepts to the Finding marked "50" of the Master's report on the ground that the same is not supported by the evidence, is contrary to the evidence and is against the weight thereof; and for the further reasons hereinbefore set forth in exceptions to Paragraph marked "8" of the Master's report.

17. The defendant excepts to the Finding marked "51" of the Master's report on the ground that the cost of gas made and purchased for the years 1922 and 1923 therein

found is unreasonable and excessive, not supported by the evidence, is contrary to the evidence and against the weight thereof.

18. The defendant excepts to Finding marked "53" of the Master's report that—

"to manufacture the gas supplied by the plaintiff to its consumers, applicable to both the gas manufactured by the plaintiff and to the gas purchased, exclusive of any return [fol. 335] on any property so used, and exclusive of the amounts actually paid by the plaintiff in the cost of gas purchased and in the payment made for use of manufacturing plant capacity,"

on the ground that same is unreasonable and excessive, contrary to the evidence, has no evidence to support it and is against the weight thereof.

19. The defendant excepts to so much of the Finding marked "55" of the Master's report which reads:

"The increased use, in recent years, of gas as a substitute for coal for heating and other domestic uses, has a tendency to accentuate the maximum day's demand in relation to the annual output,"

on the ground that this is not supported by the evidence, is contrary to the evidence and against the weight thereof; and furthermore, excepts to that portion of said Finding marked "55" which reads as follows:

"A reasonable reserve must provide not only for a reserve manufacturing capacity to meet increased demands for gas by the plaintiff's consumers over the actual previous maximum day's demand, but also a reserve capacity of the largest generating unit, as accidents or the need for repairs may at any time take this unit,"

on the ground that this is not supported by the evidence, is contrary to the evidence and against the weight thereof; furthermore defendant excepts to that portion of said Finding marked "55" which reads as follows:

"I find a reserve manufacturing plant capacity of from 20% to 25% of the plaintiff's actual maximum day's re-

quirements to be reasonable and necessary for the uninterrupted supply of gas to the plaintiff's consumers,"

on the ground that this is not supported by the evidence, is contrary to the evidence and against the weight thereof. [fol. 336] The reserve actually required varies with the progress of plant construction; the evidence shows it may safely be reduced 10% but should never go above 25%.

20. The defendant excepts to the Finding marked "57" of the Master's report upon the ground that the cost of production of gas supplied by the plaintiff to its consumers, including outlays, for labor, and material costs of manufacture, as therein found, are unreasonable and excessive, are not supported by the evidence and against the weight thereof.

21. The defendant excepts to the Finding marked "58" of the Master's report which finds the actual and reasonable cost of distribution to the plaintiff of the gas supplied by it to its consumers to be 30.39 cents per M cubic feet of gas sold during the year 1922, and 27.61 cents per M cubic feet for gas sold during the year 1923, on the ground that these costs of distribution are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore, excepts to so much of the Finding marked "58" herein which states that certain expenditures which the Master "excluded solely for the purpose of this case" "should be included in operating expenses in determining a reasonable and adequate rate for gas," upon the ground that this portion of the Finding herein marked "58" is irrelevant, is not supported by the evidence, is contrary to [fol. 337] the evidence and contrary to the settled principles of law in regard to such matters.

22. The defendant excepts to the Finding marked "59" of the Master's Report which finds the amount of taxes paid by the plaintiff per M cubic feet of gas sold for the years 1922 and 1923, on the ground that the figures therein found are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof.

23. The defendant excepts to the Finding marked "61" of the Master's Report on the ground that the figures therein contained are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore, that it appears that the allocations of services performed by the plaintiff company and its affiliated companies are made with the purpose and with the intent of increasing operating and distributing costs of the plaintiff over what they should reasonably and actually be, and placing upon plaintiff's larger measure of the burden of the expenses of the entire Consolidated System than is fair and reasonable.

24. The defendant excepts to the Finding marked "62" of the Master's Report on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof, and contrary to the generally accepted opinions of economists.

[fol. 338] 25. The defendant excepts to the Finding marked "64" of the Master's Report for "the net actual and reasonable cost of gas delivered to its consumers by the plaintiff during the years 1922 and 1923," on the ground that the costs therein found are unreasonable and excessive, are not supported by the evidence, are contrary to the evidence and against the weight thereof.

26. The defendant excepts to the Finding marked "65" of the Master's Report wherein the present net reasonable cost of manufacture and distribution of gas by the plaintiff is found, on the ground that the said costs are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof.

27. The defendant excepts to the Finding marked "67" of the Master's Report which states the net cost of gas supplied to their consumers by the companies forming the so-called transfer-of-gas system per M cubic feet of gas sold, after eliminating all inter-company charges and all return upon property or investment actually paid by one company to another for the use of property and facilities, and after giving the effect to miscellaneous operating revenues, on the ground that the costs therein found are ex-

cessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof.

28. The defendant excepts to the Finding marked "68" of [fol. 339] the Master's Report which finds the present cost of manufacture and distribution of gas supplied to their consumers by the so-called system gas companies, based upon the "actual conditions existing during the year 1923, at the current prices of coal, coke, gas-oil, and residuals, in cents per thousand cubic feet of gas sold, &c.," upon the ground that the present costs therein found are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof.

29. The defendant excepts to the Finding marked "69" of the Master's report on the ground that the costs of 650 British thermal units gas for the years 1922 and 1923 over and above the production and distribution of the gas actually made and supplied by the plaintiff to its consumers during these years, are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof.

30. The defendant excepts to the Finding marked "70" of the Master's report on the ground that the computed costs of 650 British thermal units gas therein contained, are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof.

31. The defendant excepts to the Finding marked "71" [fol. 340] of the Master's report which purports to find the present value of the land owned and used by the plaintiff unimproved as of June 1, 1923, on the ground that the various values therein found and the total present value of land therein found in the amount of $13,463,000, are unreasonable and excessive, are not supported by the evidence, are contrary to the evidence and against the weight thereof.

32. The defendant excepts to the Finding marked "72" of the Master's report which purports to find the reproduction cost of the property owned and used by the Consolidated Gas Company in the gas business as of June 1,

1923, inclusive of working capital and going value, on the ground that the various figures and estimates for the several items therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof, and that the total of $113,642,391.54, purporting to be the total reproduction cost, is excessive and unreasonable, not supported by the evidence, contrary to the evidence and is against the weight thereof.

33. The defendant excepts to the Finding marked "73" of the Master's report on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof.

[fol. 341] 34. The defendant excepts to the Finding marked "74" of the Master's report wherein it is found—

"the reasonable and necessary working capital of the plaintiff in its gas business, as of December 31, 1922, and as of the present time, was and is, at least the sum of $3,500,000."

on the ground that this figure for working capital is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and against the weight thereof.

35. The defendant excepts to the Finding marked "75" of the Master's report wherein it is found that—

"the reasonable and necessary going value of the plaintiff in its gas business, as of June 1, 1923, and of the present time, was and is, at least the sum of $9,000,000,"

on the ground that the said figure is grossly excessive and unreasonable, and that the said Finding marked "75" is not supported by the evidence, is contrary to the evidence and against the weight thereof; and upon the further ground that no allowance at all for the so-called going value should be included in the rate base in the instant case.

36. The defendant excepts to the Finding marked "76" of the Master's report purporting to find the reproduction cost of property owned by the Consolidated Gas Company and devoted to the service of its consumers as of June 1, 1923, on the ground that the costs and figures therein found

are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the [fol. 342] weight thereof; and for the further reasons hereinbefore set forth in these exceptions to the Master's report.

37. The defendant excepts to the Finding marked "77" of the Master's report wherein the reproduction cost of the property of the Astoria Light, Heat & Power Company used in the plaintiff's gas business as of June 1, 1923, as purported to be found, on the ground that the figures therein used are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and on the further ground that the reproduction cost of the property of the Astoria Light, Heat & Power Company is irrelevant and immaterial in this case, as the plaintiff is bound by the course of business adopted by it as to the amount upon which it is entitled to a return for the use of the property of the Astoria Light, Heat & Power Company.

38. The defendant excepts to the Finding marked "78" of the Master's report which purports to find the reproduction cost of certain property owned by the East River Gas Company necessarily and reasonably used by the plaintiff on the ground that the figures therein stated are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and for the further reason that this Finding is irrelevant and immaterial in this case, as the plaintiff is bound by the course of business adopted by it as to the amount and value of the property treated in Finding "76" and used in part by the plaintiff company.

39. The defendant excepts to the Finding marked "79" of the Master's report wherein the reproduction costs of [fol. 343] certain properties owned by the Standard Gas Light Company are found, on the ground that the figures therein found are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and for the further reasons hereinbefore stated in these exceptions, particularly to ex-

ception to paragraphs marked "77" and "78" of the Master's report.

40. The defendant excepts to the Finding marked "80" of the Master's report which purports to find the reproductions costs of all the property used by the plaintiff in its gas business as of June 1, 1923, on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence are contrary to the evidence and against the weight thereof; and for the further reasons hereinbefore set out in exceptions made to paragraphs marked "76," "77," "78," and "79" of the Master's report.

41. The defendant excepts to the Finding marked "82" of the Master's report wherein it is found:

"I therefore find the reproduction cost of the property owned by the plaintiff and used and useful in its gas business, was as of December 31, 1923, and is as of the present time, at least the sum of $115,324,589.75,"

on the ground that the figure herein found is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and is against the weight thereof; and on the further ground that the figure of $115,324,589.75 includes the reproduction cost of property not owned or used by the plaintiff company but by affiliated companies, and as to the value of such property and the allocation [fol. 344] of its use, the plaintiff is bound by its course of business; and further defendant excepts for reasons hereinbefore set forth in previous exceptions to the Master's Report.

42. The defendant excepts to the Finding marked "84" of the Master's Report which finds that—

"the reproduction cost of the property used by the plaintiff in its gas business, including the property owned by the plaintiff and the property of other companies devoted to the use of the plaintiff in the service of this consumer, was as of December 31, 1923, and is, as of the present time, at least the sum $155,065,633.85, etc.,"

on the ground that the figures contained therein are excessive and unreasonable; are not supported by the evi-

dence, are contrary to the evidence, and against the weight thereof; and further excepts to that part which finds:

"I therefore find the reproduction cost of the property owned by the plaintiff and used and useful in its gas business was as of December 31, 1923, and is as of the present time, at least the sum of $155,065,633.85."

on the ground that the figures therein found are excessive and unreasonable, are not supported by the evidence, contrary to the evidence and against the weight thereof, and for the further reasons hereinbefore set forth more particularly in these exceptions.

43. The defendant excepts to the Finding marked "85" of the Master's Report which finds that—

"the original cost to the plaintiff of its property used and useful in the gas business as of December 31, 1923, as [fol. 345] shown by its books of account, exclusive of expenditures made but not charged to fixed capital for interest during construction, engineering and superintendence and other undistributable structural costs and exclusive or working capital and going value, was at least the sum of $57,006,798.32,"

on the ground that the original cost therein found is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and against the weight thereof; and furthermore, on the ground that these figures do not take into account the fact that the original cost of a large portion of the property of the underlying six companies which, in 1884, were merged and consolidated into the plaintiff company, was much less than appears to be the cost of the said property on the plaintiff's books.

44. The defendant excepts to the Finding marked "86" of the Master's Report which reads as follows:

"The working capital reasonably required for the conduct of its gas business was at least the sum of $2,550,000,"

on the ground that this figure is excessive and unreasonable, is contrary to the evidence, is not supported by the evidence and is against the weight thereof.

45. The defendant excepts to the Finding marked "88" of the Master's Report which finds that—

"the original cost of the manufacturing plant, distributing system and other tangible property actually used by the plaintiff in its gas business as of December 31, 1922, including the investment of plaintiff in its property as used and investment of The Astoria Light, Heat & Power Company, The Standard Gas Light Company, and The East River Gas Company of Long Island City in the re- [fol. 346] spective properties owned by those companies and devoted to the use of the plaintiff in the service of its consumers, inclusive of going value, amounted to at least the sum of $98,561,127.40,"

on the ground that the original cost therein found is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and is against the weight thereof; and furthermore, the allowance for going value therein contained is excessive and unreasonable for the reasons hereinbefore stated in previous exceptions herein; and on the further ground that there is no original cost of the going value of the plaintiff company nor is there any going value to be separately assessed and that the figure given for the original cost of the property of the Consolidated Gas Company includes the cost of property not actually used in the plaintiff's gas business, and includes also franchise values.

46. The defendant excepts to the Finding marked "89" of the Master's report which finds that—

"the original cost to the plaintiff of its property used and useful in its gas business, as of June 1, 1923, as shown by its books of account, exclusive of expenditures made but not charged to fixed capital for interest during construction, engineering and superintendence, and other undistributable structural costs, and exclusive of working capital and going value, was at least the sum of $59,078,363.44."

on the ground that the original cost therein found is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and against the weight thereof; and furthermore on the ground that these figures do not

take into account the fact that the original cost of a large [fol. 347] portion of the property of the underlying six companies which, in 1884, were merged and consolidated into the plaintiff company, was much less than appears to be the cost of the said property on the plaintiff's books.

47. The defendant excepts to the Finding marked "90" of the Master's Report which reads as follows:

"The working capital reasonably required for the conduct of its gas business, was at least the sum of $3,000,000,"

on the ground that this figure is excessive and unreasonable, is contrary to the evidence, is not supported by the evidence and is against the weight thereof.

48. The defendant excepts to the Finding marked "91" of the Master's Report upon the ground that the figures are unreasonable, excessive, are contrary to the evidence and are against the weight thereof.

[fol. 348] 49. The defendant excepts to the Finding marked "92" of the Master's report which finds that—

"the original cost of the manufacturing plant, distributing system and other tangible property actually used by the plaintiff in its gas business, as of June 1, 1923, including the investment in its property so used and investment of The Astoria Light, Heat & Power Company, The Standard Gas Light Company and The East River Gas Company of Long Island City, in the respective properties owned by those companies and devoted to the use of the plaintiff in the service of its consumers, inclusive of going value, amounted to at least the sum of $98,8[illegible]3,63,"

on the ground that the original cost therein found is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and against the weight thereof; and furthermore on the ground that these figures do not take into account the fact that the original cost of a large portion of the property of the underlying six companies which, in 1884, were merged and consolidated into the plaintiff company, was much less than appears to be the cost of the said property on the plaintiff's books; and furthermore the allowance for working capital therein contained is ex-

cessive and unreasonable for the reasons hereinbefore stated in previous exceptions herein; and on the further ground that there is no original cost of the going value of the plaintiff company nor should going value be separately assessed and that the figure given for the original cost of the property of the Consolidated Gas Company includes the cost of the property not actually used in the plaintiff's gas business and includes also franchise values.

[fol. 349] 50. The defendant excepts to the Finding marked "94" of the Master's report which finds that—

"the original cost of the property owned by the plaintiff and used by it in its gas business, as of December 31, 1923, as shown by its books, inclusive of working capital and going value, was at least the sum of $71,267,761.95,"

on the ground that the original cost therein found is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and against the weight thereof; and furthermore on the ground that these figures do not take into account the fact that the original cost of a large portion of the property of the underlying six companies which, in 1884, were merged and consolidated into the plaintiff company, was much less than appears to be the cost of the said property on the plaintiff's books; and furthermore the allowance for working capital therein contained is excessive and unreasonable for the reasons hereinbefore stated in previous exceptions herein; and on the further ground that there is no original cost of the going value of the plaintiff company nor should going value be separately assessed and that the figure given for the original cost of the property of the Consolidated Gas Company includes the cost of the property not actually used in the plaintiff's gas business and includes also franchise values.

51. The defendant excepts to the Finding marked "96" of the Master's report which finds—

"the original cost of the manufacturing plant, distributing [fol. 350] system and other tangible property actually used by the plaintiff, including the actual investment of the plaintiff in its property so used, and the actual investment of The Astoria Light, Heat & Power Company, The East

River Gas Company of Long Island City, and The Standard Gas Light Company in such property used by the plaintiff in the service of its consumers, as of December 31, 1923, was and is at least the sum of $98,917,970.64,"

on the ground that the original cost therein found is excessive and unreasonable, is not supported by the evidence, is contrary to the evidence and against the weight thereof; and furthermore on the ground that these figures do not take into account the fact that the original cost of a large portion of the property of the underlying six companies which, in 1884, were merged and consolidated into the plaintiff company, was much less than appears to be the cost of the said property on the plaintiff's books; and furthermore the allowance for working capital therein contained is excessive and unreasonable for the reasons hereinbefore stated in previous exceptions herein; and on the further ground that there is no original cost of the going value of the plaintiff company nor should going value be separately assessed and that the figures given for the original cost of the property of the Consolidated Gas Company includes the cost of the property not actually used in the plaintiff's gas business and includes also franchise values.

52. The defendant excepts to the Finding marked "97" of the Master's report on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against [fol. 351] the weight thereof; and furthermore upon the ground that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

53. The defendant excepts to the Finding marked "98" of the Master's report on the ground that the figures therein contained are excessive & unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

54. The defendant excepts to the Finding marked "99" of the Master's report on the ground that the figures therein contained are excessive & unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

55. The defendant excepts to the Finding marked "100" of the Master's report on the ground that the figures therein contained are excessive & unreasonable, are not supported by the evidence, are contrary to the evidence and against [fol. 352] the weight thereof; and furthermore that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

56. The defendant excepts to the Finding marked "101" of the Master's report on the ground that figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

57. The defendant excepts to the Finding marked "102" of the Master's report on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

58. The defendant excepts to the Finding marked "103" of the Master's report on the ground that the figures therein contained are excessive and unreasonable, are not [fol. 353] supported by the evidence, are contrary to the

evidence and against the weight thereof; and furthermore, that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

59. The defendant excepts to the Finding marked "104" of the Master's report on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore, that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

60. The defendant excepts to the Finding marked "105" of the Master's report on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore, that the findings of fact and conclusions of law therein contained are not in accordance with the established principles of law involved; and for the further reasons hereinbefore set forth in prior exceptions to the Master's report herein.

61. The defendant excepts to the Finding marked "106" of the Master's report which find that:

"The plant, machinery and equipment owned by the plaintiff and used in its gas business, and the plant, ma- [fol. 354] chinery and equipment owned by the affiliated gas companies used by the plaintiff in its gas business, have been and are maintained in a high state of repair and in excellent operating condition; proper repairs thereto and renewals and replacements thereof have been made, as and when required; and no diminution or loss in productive capacity has been sustained; and such plant, machinery and equipment are now in as high a state of efficiency for the economical production of gas as if new,"

on the ground that the same is not supported by the evidence, is contrary to the evidence and is against the weight of evidence; and for the further reason that the finding

and conclusions contained therein *contained* are contrary to sound reasoning and human experience.

62. The defendant excepts to the Finding marked "107" of the Master's report which purports to find the reasonable and proper return upon the present value of the plaintiff's properties and concludes that:

"At no time since the enactment of Chapter 899 of the Laws of 1923 has the plaintiff earned in its gas business such return at the rate prescribed therein, of $1.00 per thousand cubic feet of gas sold, either upon the amount of the present value of its property or upon the amount of the minimum investment in such property,"

on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof; and upon the further ground that the findings of fact and conclusions of law contained therein are contrary to the well established principles of law therein involved.

[fol. 355] 63. The defendant excepts to the Finding marked "108" of the Master's report on the ground that the figures therein contained for operating expenses are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore, that the figures therein found for the return upon the properties of the plaintiff in its gas business are accordingly far below the actual rate of return upon the property which the plaintiff has actually invested in the gas business; and furthermore, that the figures used by the Master for his basis of computation of property actually used by the plaintiff company are excessive and unreasonable for the reasons hereinbefore previously set forth in these exceptions.

64. The defendant excepts to the Finding marked "109" of the Master's report on the ground that the figures therein contained for operating expenses are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore, that the figures therein found for the return upon the properties of the plaintiff in its gas business are

accordingly far below the actual rate of return upon the property which the plaintiff has actually invested in the gas business; and furthermore, that the figures used by the Master for his basis of computation of property actually used by the plaintiff company are excessive and unreasonable for the reason hereinbefore previously set forth in these exceptions.

[fol. 356] 65. The defendant excepts to the Finding marked "110" of the Master's report on the ground that the figures therein contained for operating expenses are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore, that the figures therein found for the return upon the properties of the plaintiff in its gas business are accordingly far below the actual rates of return upon the property which the plaintiff has actually invested in the gas business; and furthermore, that the figures used by the Master for his basis of computation of property actually used by the plaintiff company are excessive and unreasonable for the reasons hereinbefore previously set forth in these exceptions.

66. The defendant excepts to the Finding marked "111" of the Master's report on the ground that the figures purporting to show the net cost of gas of the statutory standard, etc., are excessive and unreasonable and not supported by the evidence, are contrary to the evidence and against the weight thereof; and furthermore that the figures purporting to show the net cost of the statutory standard, etc., of gas per M cubic feet of gas sold are excessive and unreasonable, not supported by the evidence, contrary to the evidence and against the weight thereof.

67. The defendant excepts to the Finding marked "112" of the Master's report on the ground that the figures purporting to show the net cost of gas of the statutory standard are excessive and unreasonable, not supported by [fol. 357] the evidence, contrary to the evidence and against the weight thereof for the reasons set forth in exception "66;" and furthermore that the figures found for plaintiff's investment in its own properties used in its gas business, the reproduction cost of such properties and the so-called

present value of such properties are unreasonable and excessive and not supported by the evidence, contrary to the evidence and against the weight thereof, and therefore the figures found for the rate of return on such excessive values are correspondingly materially below the actual and reasonable rate of return which the plaintiff company has enjoyed upon the fair and reasonable value of properties actually devoted to the gas business.

68. The defendant excepts to the Finding marked "113" of the Master's report on the ground that the findings of fact and conclusions of law therein contained are not supported by the evidence, are contrary to the evidence and against the weight thereof; and on the further ground that such findings and conclusions attempt to place a construction on a statute of the Legislature of the State of New York which is erroneous and contrary to the established principles of law involved.

69. The defendant excepts to the Finding marked "118" of the Master's report which purports to conclude that the price and quality provisions of chapter 899 of the laws of 1923 are not separable, on the ground that such finding and conclusion of law is not a proper interpretation of the [fol. 358] said statute. The Special Master should have found that the two provisions of the statute above mentioned were and are separable and that if the provision requiring the furnishing of 650 British thermal units gas per M cubic feet was impossible of performance and therefore unconstitutional, the plaintiff company was required to furnish gas of only British thermal units standard as required by Order #108 of the Public Service Commission of the State of New York made and filed August 30, 1922. The Special Master should further have found the cost to the plaintiff of making gas of the calorific quality prescribed by said order #108 of the Public Service Commission for the years 1922 to 1924, inclusive.

70. The defendant excepts to the Finding marked "119" of the Master's report on the ground that the findings therein contained and the conclusions arrived at are not supported by the evidence, are contrary to the evidence and against the weight thereof; and on the further ground

that the said conclusions are erroneous in law and contrary to the well established principles in law involved. No contract existed between the plaintiff company and the Public Service Commission to the extent of making the provisions of chapter 899 of the laws 1923 violative of or in contravention of the plaintiff's constitutional guarantees.

71. The defendant excepts to the Finding marked "120" of the Master's report on the ground that the same is not supported by the evidence, contrary to the evidence and [fol. 359] against the weight thereof; and on the further ground that said Findings and Conclusions are contrary to the law.

72. The defendant excepts to the Finding marked "121" of the Master's Report containing his recommendations based upon previous Findings, on the ground that the same are not supported by the evidence, are contrary to the evidence and against the weight thereof; and on the further ground that they are contrary to the law involved; and for the further reasons hereinafter set forth more specifically in the exceptions.

Dated February 4, 1925.

Respectfully submitted,

Albert Ottinger, Attorney-General of the State of New York. Office & P. O. Address: Capitol, Albany, N. Y. John Holley Clark, Jr., Solicitor for defendant Albert Ottinger, as Attorney-General of the State of New York. John Holley Clark, Jr., Charles E. Buchner, Wilber W. Chambers, of Counsel.

[fol. 360] DISTRICT COURT OF THE UNITED STATES, SOUTHERN DISTRICT OF NEW YORK

In Equity. No. E. 26-366

CONSOLIDATED GAS COMPANY OF NEW YORK, Plaintiff,

against

WILLIAM A. PRENDERGAST, WILLIAM R. POOLEY, CHARLES Van Voorhis, Oliver C. Semple, and George R. Van Namee, Constituting the Public Service Commission of the State of New York, and Albert Ottinger, as Attorney-General of the State of New York, Defendants.

EXCEPTIONS TO SPECIAL MASTER'S OPINION FILED IN CONNECTION WITH HIS REPORT

Now comes the defendant Albert Ottinger, as Attorney-General of the State of New York, and excepts to the Findings of Fact and Conclusions of Law contained in the Opinion filed the 15th day of January, 1925, in connection with his Report, by James G. Graham, Special Master, in the following particulars, to wit:

1. The defendant excepts to the Master's Opinion upon the question of "Difference between present and former suit" on pages 4, 5, 6, 7 and 8 of said Opinion, on the ground that there is no fundamental difference between the present suit and the prior litigation determined in Consolidated Gas Company of New York v. Newton, etc., 267 Fed. 231; 258 U. S. 165, except that in the present litigation there appear the questions of law as to whether or not the price and quality provisions of the statute are separable, and [fol. 361] whether or not the statute infringes upon the constitutional guarantees of the plaintiff company.

2. The defendant excepts particularly to that portion of the Master's Opinion which states (pp. 4 and 5):

"It was found that the Astoria plant was essentially a manufacturing department of the plaintiff, and to test the cost of making gas the Court took house A and house C of that plant (being the houses at which coal and water gas were respectively manufactured at the lowest reported

cost). This was conceding to the defendants the utmost of their contentions on which the statute should be tested. * * * While in that case some evidence was introduced as to the cost of reproduction of the plaintiff's property, it was not strongly pressed as the 'rate base' for the purposes of that suit, for the reason that on the minimum cost of operation thus taken by the District Judge it appeared that the return was insufficient to net the company a fair return on its investment in any event, and that the operating costs had in fact come to exceed the rate."

And at page 6:

"It also presented what it claimed to be its investment therein up to December 31, 1923, according to its books and according to the findings of the Court in the prior suit plus net additions,"

on the ground that said statements or findings are not supported by the evidence, are contrary to the evidence and do not set forth in full with the necessary particularity the conditions upon which the Opinion in the prior case is founded; and upon the further ground that the Opinion of the learned Judge who decided the former case speaks for itself.

3. The defendant excepts to the statement of the Master's Opinion on page 13 thereof in regard to the intercompany relationships which states that:

[fol. 362] "The development of the inter-relationship of the gas companies of the Consolidated transfer-of-gas system has been greatly in the interest of the public, as well as the companies and the investors in their property,"

on the ground that the inter-relationship of the companies has been a benefit to the subsidiary companies, placing an undue burden upon the parent plaintiff company and its consumers. Whether it has been in the interest of the public is doubtful. Gas was cheaper when there was competition and the various consolidations have been made purely in the expectation of profits.

4. The defendant excepts to the statement of the Master's Opinion on page 14 thereof which found:

"It was then determined to discontinue any further unnecessary duplication of investment either in plant, mains or services. This course not only terminated the waste due to the duplication of properties, but enabled the companies, by an intensive use of their properties, the centralization of certain services, the joint use of facilities, the extending of gas facilities owned by one gas company for use by another gas Company, the purchase of materials and supplies in large quantities, the standardization of methods, and the interchange of information as to improvements and developments in the art, etc., to effect economies in operating costs, property investments, and carrying charges. Out of this co-ordination of the facilities and operations of the companies grew a system of inter-company charges therefor,"

on the ground and notwithstanding that an effort was made [fol. 363] to discontinue any further unnecessary duplication of investment, the waste due to duplication was not terminated because the cost of such duplication still appears in the fixed capital account on which the plaintiff company claims a return.

5. The defendant excepts to the statement in the Master's Opinion on page 15 thereof which states:

"Aside from the tying-in of mains due to the foregoing considerations, there has been considerable tying-in, in the Borough of Manhattan, occasioned by the extensive subway construction by the City of New York in recent years, which has at many places necessitated the installation of single surface or overhead by-passes in place of such mains of the various companies as were temporarily rendered unavailable for use, because of the conditions created by the subway construction,"

on the ground that it is not shown that the tying-in of mains due to subway construction was done at the cost of the plaintiff, or that it has been of any benefit to the consumers of the plaintiff; and furthermore upon the ground that the said statement or finding is immaterial.

6. The defendant excepts to the statement in the Master's Opinion on page 19 thereof which states:

"The intercompany charges made for services, materials [fol. 364] or the use of facilities, are intended to include the actual cost of labor and materials furnished by one company for the benefit of another, the actual maintenance cost of property used, the carrying cost, at an 8 per cent rate of interest, of the investment devoted by one company to another's use, and, where reasonable and proper, an added charge for undistributed expenses" (p. 20),

on the ground that the finding is not supported by the evidence, is contrary to the evidence and there is no evidence to sustain such statement or finding; and on the further ground that charges to the subsidiary companies by the plaintiff company were generally too low, were not intended to be fair but were intended to and have thrown the burden of the entire system on the plaintiff company.

7. The defendant excepts to the statement in the Master's Opinion on page 20 thereof which found:

"The fact that one company or another performs the service of makes the investment in the property jointly used by several or all of the companies, tends to decrease the amount of necessary investment and hence to lessen the cost of the service to the consumers, taking all elements into account. The company which possesses the facilities or commands the forces, either by reason of a prior location, a franchise right or adaptability for the work, renders the service or lets the use of facilities to the other company. The creditor company economizes in its own expenses by reason of the intensive and full utilization of its property, and the smaller cost per unit of service. The debtor company effects corresponding economies, minimizes investment and carrying costs, avoids duplication and receives service or the use of property at cost."

on the ground that the finding is not supported by the evi- [fol. 365] dence, is contrary to the evidence and there is no evidence to sustain such statement or finding; and further that in case of some departments the subsidiary companies are not charged anything for the service and in the case of other departments operated by the plaintiff are not charged a sufficient amount.

8. The defendant excepts to the statement in the Master's Opinion on page 21 thereof which states:

"For maintaining the department of claims and arrears, for maintaining the recording pressure gauges at various localities in the Borough of Manhattan, for operating for joint use the 63rd Street gas storage station and the Kingsbridge gas storage station, for maintaining the chemical department, including the operating of the chemical laboratory, for maintaining the office of the advertising manager, for maintaining and operating the general office restaurant for employes, for maintaining the meter shop school of instruction, for pumping drips and for the personal services of certain employes, and the like, the costs are apportioned among the companies directly benefitting, upon or equitable and fair basis equally applicable to the plaintiff and to each interested company,"

on the ground that the finding is not supported by the evi- [fol. 366] dence, is contrary to the evidence and that there is no evidence to sustain such statement or finding.

9. The defendan, excepts to the statement of the Master's Opinion on pages 21 and 22 thereof which states:

"For the use of space in the General Office Building of the plaintiff, the charges are made to affiliated companies upon the basis of the number of square feet occupied at various rates according to location, and include only the proportion of the operating and maintenance expenses applicable to such rented space and of the carrying cost, of the investment in the rented portion of the building."

on the ground that the method adopted for charging the affiliated companies for the space used by them in said office building was and is calculated to and has resulted in placing upon plaintiff company an undue proportion of the operating expenses and carrying charges on said building.

9-A. The defendant excepts to the statement in the Master's Opinion on page 22 thereof which states:

"A charge is made by the plaintiff to other gas companies for the use of the former's property jointly used, and such charges are pro-rated according to the extent of use and

include a proportionate share of the maintenance expense and the carrying cost, of the investment in the property devoted to the use of other companies and used by them,"

on the ground that the pro-rating of such charges was calculated to and has placed the plaintiff company on undue proportion of the cost of operation and the carrying charges of such jointly used facilities.

[fol. 367] 10. The defendant excepts to the statement in the Master's Opinion on pages 23 & 24 thereof which states:

"In June of 1923, the two latter plants were used only as reserve or stand-by plants, and had been so used and maintained for some years past, a very small amount of gas having been actually manufactured at either plant, although both plants were kept in a condition to be operated to capacity should the occasion arise. These two plants were withdrawn from service on October 31, 1923, the capacity of the Twenty-first Street water-gas plant having been increased to an amount at least equalling that of the two plants discontinued, so that the manufacturing capacity owned and operated by the plaintiff at the present time is substantially the same as it was on June 1, 1922, although differently distributed,"

on the ground that the evidence shows that the 14th Street and 42nd Street plants were not used as reserve or stand-by plants in June, 1923, nor were they useful for such purposes at that time or for some years prior thereto; and on the further ground that the manufacturing capacity owned and operated by the plaintiff at the present time is substantially greater than it was on June 1, 1923.

11. The defendant excepts to the statement in the Master's Opinion on page 27 thereof which says:

"Incidentally, it may be stated that inasmuch as both the plaintiff and the defendants' witnesses agree that this portion of the statute would prevent the use of coal gas [fol. 368] plants now owned and operated by the Astoria Company and would have prevented the use of the 14th and 42nd Street plants down to their abandonment late in 1923, it would have been, and would now be, in view of the

evidence in this case, an illegal confiscation of such property, and therefore, obnoxious to the Constitution, if, The Astoria Company is merely a manufacturing department of the Consolidated Company, as is the way in which it was treated by Judge Hand in the former suit and is here taken,"

on the ground that it is contrary to the evidence, is not supported by the evidence and against the weight thereof.

12. The defendant excepts to the statement in the Master's Opinion on page 28 thereof which states:

"In the case of Willcox v. Consolidated Gas Company (212 U. S. 19), it was held by the Supreme Court that in determining the amount and value of property on which this plaintiff is constitutionally entitled to earn a fair return, the value of the property at the time of the inquiry must be adopted. In the second series of litigation as to this plaintiff's rates (Newton v. Consolidated Gas Company, 267 Fed. 231; 258 U. S. 165), it was found that the value of the company's property, for the purposes of that case, was at least the amount of the actual and unimpaired investment therein, and that sum was sufficient to demonstrate the confiscatory character of the Eighty-cent rate then under review,"

on the ground said statement or finding does not properly construe the case of Willcox v. Consolidated Gas Company [fol. 369] and Newton v. Consolidated Gas Company. The said cases and Opinions speak for themselves.

13. The defendant excepts to the statement in the Master's Opinion on page 32 thereof which states:

"Of course operating expenses and return at different rates are necessarily to be taken into consideration, but the probative value of evidence as to the amount and market value of bonds and stocks is not so clear. These latter may and frequently do fluctuate greatly and are affective by conditions bearing but slight relation to the intrinsic value or earning capacity of the property, and in the case of this plaintiff these factors have ceased to have a bearing, as the plaintiff owns stock control of both gas and electric

companies aside from its own gas operations, and the value of its stock is not now dependent upon its own gas properties and the return received therefrom, nor are its earnings the product of the gas business alone" (p. 33).

on the ground the Master should have found the capital investment of the plaintiff company devoted to gas business and having ascertained said capital, should have considered it in the determination of a rate base herein.

14. The defendant excepts to the statement in the Master's Opinion on page 33 thereof which states:

"In view of the present lack of a clear definition as to the manner in which present value is to be ascertained, I have taken fully the proofs both as to the original investment and additions thereto, and as to the reproduction cost [fol. 370] at the present time (and the present condition of the property); and I have made findings as to both, as well as finding an amount which, in my opinion, represents the present fair value of property, giving due consideration to all the elements entering into it, as I understand to be required by the rule laid down by the Supreme Court of the United States in its approval of Smythe v. Ames, (supra),"

on the ground that it appears that the Master in fact found a rate base so nearly approximating reproduction cost that he could not have given the various other elements the due consideration made necessary by the opinion of the Supreme Court of the United States and frankly gave no consideration to the amount and value of the stock issued devoted to the gas business.

15. The defendant excepts to the statement in the Master's Opinion page 35 thereof which states:

"As to the 14th and 42nd Street plants, I must be governed by the evidence before me as to the use made of the property and the necessity therefor. I do not think it was successfully disputed that on June 1, 1923, both plants were being kept up as reserve plants and could have been put in operation if the necessity arose within a comparatively short time. The machinery and equipment was there in good working order and, while the company very properly did not maintain there a full working complement of

gas making labor, they could have been transferred from some of the other plants and the plants brought to capacity in a week as Mr. Woods testified. I do not understand that [fol. 371] Mr. Little, defendants' expert witness, disputes this fact. Undoubtedly the necessity of making gas there had not arisen for several years (since 1920), and the company was in 1923 in the process of adding to the 21st Street gas plant sufficient capacity to enable it to abandon the 14th and 42nd Street plants, which were objectionable for year-round operation in the Borough of Manhattan on account of being coal-gas plants,"

on the ground it is contrary to the evidence, that there is no evidence tending to support it and is against the weight thereof; and for the further reasons hereinbefore set forth in exceptions to similar findings in the Master's report.

16. The defendant excepts to the statement in the Master's Opinion on page 35 thereof which states:

"It is true the company had decided in 1923 that it would be advantageous to abandon these plants, but only when equal capacity had been constructed elsewhere. In the meantime, they had also purchased the land at Hunts Point and were arranging for the construction of large manufacturing units at that place,"

on the ground that it is contrary to the evidence, has no evidence tending to support it and is against the weight of the evidence; and furthermore for the reasons hereinbefore set forth in Paragraph of defendant's exceptions to the Master's Report. The plaintiff had not used these plants for years, had no intention of using them and held them only until it was profitable to sell them as real estate.

[fol. 372] 17. The defendant excepts to the statement in the Master's Opinion on page 36 thereof which states:

"Except for the desirability of removing coal-gas plants from Manhattan Island and the purchase and prospective installations at Hunts Point, which contemplate an addition of probably 30,000,000 cubic feet of daily capacity within the coming year or two, it would not have been safe to abandon these two plants, as even with the additional capacity installed at 21st Street the reserve is below the

point at which Mr. Little said the company should create additional capacity,"

on the ground that it is contrary to the evidence, is not supported by the evidence and against the weight thereof; and upon the further ground that the Hunts Point plant is contemplated for the use of the parent company and all of the affiliated companies. It would not only have been safe but profitable, from the consumers standpoint, to abandon these plants many years ago.

18. The defendant excepts to the statement in the Master's Opinion on page 38 thereof which states:

"In my judgment the reasonable fair value of the land (unimproved) of the plaintiff on June 1, 1923, including the 14th and 42nd Street plants, but excluding one-third of the Kingsbridge holder land, and taking off 61.8 per cent of the joint office building leaves $13,460,000 as the value of the land of the plaintiff used in the gas business."

on the ground that the figure therein contained for the value of land of the plaintiff used in the gas business is unreasonable and excessive, is contrary to the evidence and against the weight thereof; and for the further reason that [fol. 373] said computation improperly includes the 14th and 42th Street plants.

19. The defendant excepts to the statement in the Master's Opinion on pages 38 and 39 thereof which states:

"I have valued the land of the Astoria Company at the sum of $4,350,000. Deducting the portion of the Luyster Creek coal-handling and storage property devoted to the use of The New York Edison Company ($210,000) and apportioning the remainder on the basis of the Woods' report gives 80.074419 per cent thereof, or $3,314,373.94 as the value of the portion used by the Consolidated Company,"

on the ground that it is contrary to the evidence, is not supported by the evidence and against the weight thereof; and upon the further ground that 80 per cent is an excessive proportion or allocation to the plaintiff company; and further that the amount allocated to the New York Edison

Company ($210,000) should have been larger; and on the further ground that there is at Astoria some three hundred acres of land which has been vacant for twenty years and which, if useful at all, has been and is held as a reserve of land for the entire system.

[fol. 374] 20. The defendant excepts to the statement in the Master's Opinion on page 39 thereof which states:

"Summarizing these values gives the value of the land of the plaintiff and other companies used in the gas business, unimproved, as of June 1, 1923, as follows:

Consolidated Gas Company	$13,460,000
Astoria Light, H. & P. Co.	3,314,373
Standard Gas Light Co.	17,333
East River Gas Co.	34,996
Total	$16,826,602

This total had changed on December 31, 1923, and as of the present time by the withdrawal of the 14th and 42nd Street properties for land sold, valued at $3,547,055, and for the parcel at 42nd Street still owned, valued at $135,000, not claimed in the gas business after the withdrawal of the station, and by the addition of the portion of the value of the Hunts Point property included herein, $500,000, and by the parcel of land adjoining the 132nd Street Station property purchased at a price of $20,000, making the value of the land of the plaintiff owned and used in the gas business, as of December 31, 1923, $13,664,547."

on the ground that it is contrary to the evidence, is not supported by the evidence and against the weight thereof; and on the further ground that the figures therein contained are excessive and unreasonable; and upon the further grounds hereinbefore set forth in the defendant's exceptions to the Master's opinion and report.

[fol. 375] 21. The defendant excepts to the statement in the Master's Opinion on pages 40 and 41 thereof which states:

"I think a great deal of the difference in the two estimates is due to the fact that Mr. Snow did not have

the full and complete information which was in Mr. Davies' possession in making his estimate. I cannot believe that a work of that magnitude and character could be constructed at present at an increased cost of only 21 per cent over its original cost in 1910, having in mind the tremendous increase during and since the war in the cost of materials and labor. Mr. Snow admitted to certain omissions which increased his estimate to $5,903,884. After a careful examination of the testimony of both these gentlemen, I have come to the conclusion that a figure of $7,750,000, which is about a 65 per cent increase over the original cost, is an amount which is a reasonable one, and I have so taken it,"

on the ground that the same is contrary to the evidence, is not supported by the evidence; and upon the further ground the figure of $7,750,000 is excessive and unreasonable and does not take into sufficient account the actual investment.

22. The defendant excepts to the statement in the Master's Opinion on pages 45 and 46 thereof which states:

"In view of the increased demands made on the Astoria Company and the increased sales of the Consolidated Company, I think an allowance of $3,500,000 for the Consolidated Company and $3,000,000 for the Astoria Company (of which $2,400,000 is used for the benefit of the [fol. 376] Consolidated Company), or $6,500,000 in all, is a fair and reasonable amount, and I so find,"

on the ground that the figures therein contained are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in these exceptions; and on the further ground that it appears on the face of said Finding that the total amount of working capital used for the benefit of the Consolidated Gas Company should not exceed $5,900,000, upon the figures set forth by the Master, which amounts are excepted to as excessive for working capacity and should not exceed $4,811,538.80.

23. The defendant excepts to the statement in the Master's Opinion on pages 49 and 50 thereof which states:

"The investment in the properties used by the plaintiff in its gas business on December 31, 1923, approximates $90,000,000. Although no definite percentage has been laid down as representing the measure of the "going value" of a public utility company, examination of the cases has shown that courts have generally found an amount approximating 10 per cent of the sum found as the value of the tangible property, as fairly representing the 'going value' (Mobile Gas Company v. Paterson, 203 Fed. 219; Streator Aqueduct Company v. Smith, 295 Fed. 385). In some of these instances the sum found as the value of the tangible property has been approximately the investment; in other instances a larger sum determined as the fair value; but the percentage of relationship has generally been about what I have stated. In determining the ques-[fol. 377] tion of the confiscatory character of the statutory rate, values should be conservative rather than otherwise, in order that the courts may see whether by any fair method such rates can be sustained. I think, therefore, that for the purpose of this suit an allowance of $9,000,000 for 'going value' is reasonable, especially in view of the fact that in all probability some of the elements of 'going value' were included in the amount allowed in its investment on consolidation. I have eliminated them from consideration, as already stated, in reaching this sum,"

on the ground that said Finding is contrary to the principles of law involved and is not warranted or supported by the evidence; and for the further reason that in addition to finding an amount approximating 10% of the investment as fairly representing the going value, the Master has in addition allowed an additional amount of $7,781,000 for franchise value.

24. The defendant excepts to the statement in the Master's Opinion on pages 50 and 51 thereof which states:

"The element of going value, however, where definitely and sufficiently proved, seems clearly to be a part of the rate base under Des Moines Gas Company v. Des Moines, supra; Denver Union Water case (246 U. S. 178); Southwestern Bell Telephone Co. v. City of Fort Smith, 294

Fed. 102, and Venner v. Urbana Water Co., 174 Fed. 348, even although in the end the amount thereof is not a matter of exact mathematical calculation but of judgment. In this case, the evidence shows that a business has been created, successfully in operation, with the manufacturing plants organized and operating in a modern, efficient, [fol. 378] economical manner, with a personnel coordinated and of long experience; that considerable amounts have been and are being expended annually in advertising the advantages of the use of gas and gas appliances, in the instruction of consumers in their use, in devising new methods of applying its use to domestic and commercial purposes, and in bringing such methods to the attention of present and prospective customers, in canvassing and soliciting business, in making tests and experimentation of new devices and in other ways doing many and various things to attract new customers and extend the demands of old ones. It is true that the company has, to a certain extent, been reimbursed for its expenditures in extending its business, but that has been held no reason for not considering them as elements in 'going value' (Lincoln Gas Company v. Lincoln, 250 U. S. 256, 267; City of Minneapolis v. Rand, 285 Fed. 819, 830; Kings County Lighting Company case, 210 N. Y. 479, 486). I think a clear distinction is shown here between them and elements such as past losses, good will, development, or undistributed structural expenses. Elements of going value are certainly above and beyond those mentioned, and do exist in the present case,"

upon the grounds and for the reasons hereinbefore set forth in the exceptions contained in the foregoing paragraph herein marked "23."

25. The defendant excepts to the statement in the Master's Opinion on page 51 thereof, which states:

"I am now able to proceed to find the amount of the investment in the property of the plaintiff and in that portion of the property of other companies used by it for [fol. 379] the benefit of its consumers. I find the investment cost of the portion of the tangible property of the Consolidated Gas Company used by it in its gas business as of December 31, 1922, was the sum of $49,225,798.32;

franchises and rights $7,781,000; working capital $3,500,000; going value $9,000,000; total $69,806,798.32,"

on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and further for the reasons hereinbefore set forth in the exceptions to this Opinion and in the exceptions to the Master's Findings; and for the further reason that the going value of $69,000,000 was never "invested" in the property of the plaintiff.

26. The defendant excepts to the statement in the Master's Opinion on page 52 thereof, which states:

"The original cost of the Astoria Light Heat & Power Company's property used and useful in the gas business as of December 31, 1922, as shown by its books of account, exclusive of working capital, was at least the sum of $25,769,744.29. Of the above amount mentioned the portion devoted to the plaintiff in its gas business amounted to the sum of $22,507,174,83; working capital $2,550,000, portion devoted to the plaintiff's gas business was $2,227,158.14; total $24,734,332.97."

on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight of the evidence; and for the further reason that the Master has not deducted the necessary accrued depreciation [fol. 380] in finding his figures for original cost.

27. The defendant excepts to the statement in the Master's Opinion on page 52 thereof wherein it is stated:

"The investment in the jointly used property of The East River Gas Company of Long Island City amounted to the sum of $6,723,687.64 of which the portion used by the plaintiff amounted to the sum of $4,139,587.09."

on the ground that the figures therein contained are excessive and unreasonable, are not supported by the evidence, are contrary to the evidence and against the weight thereof; and for the further reason that the Master has not de-

ducted the necessary accrued depreciation in find- his figures for original cost.

28. The defendant excepts to the statement in the Master's Opinion on page 52 thereof wherein it states:

"This makes the total investment in the property of the plaintiff and that of the other property used by it as of December 31, 1922, as follows:

Property of Consolidated Gas Company	$69,506,798 32
Property of The Astoria Light, Heat & Power Company	24,734,332 97
Property of The Standard Gas Light Company	180,409 02
Property of The East River Gas Company of Long Island City	4,139,587 09
Total	$8,561,127 40,"

[fol. 381] on the ground that the figures are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof; and for the reasons hereinbefore set forth in these exceptions to the Master's Findings.

29. The defendant excepts to the statement in the Master's Opinion on page 52 thereof which states:

"I find that the cost of the portion of the property of the Consolidated Gas Company used by it in its gas business as of June 1, 1923, was the sum of $51,297,363.44; franchises and rights $7,781,000; working capital $3,500,000; going value $9,000,000; total $71,578,363.44,"

on the ground that the figures therein contained are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in the exceptions contained in paragraph "25" of these exceptions.

30. The defendant excepts to the statement in the Master's Opinion on pages 52 and 53 thereof which states:

"The original cost to the Astoria Light, Heat & Power Company of its property used and useful in its gas busi-

ness as of June 1, 1923, as shown by its books of account exclusive of working capital, was at least the sum of $26,136,953.16 working capital $3,000,000; total $29,136,953.16. Of the above mentioned amount, the portion devoted to the plaintiff in its gas business amounted to the sum of [fol. 382] $23,331,245.86 on the grounds that the figures therein contained are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in the exceptions contained in paragraph "26" of these exceptions.

31. The defendant excepts to the statement in the Master's Opinion on page 53 thereof which states:

"The investment in the jointly used property of The East River Gas Company of Long Island City amounted, as of June 1, 1923, to the sum of $6,723,319.52, of which the portion used by the plaintiff amounted to $3,795,038.34,"

on the ground that the figures therein contained are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in the exceptions contained in paragraph "27" of these exceptions.

32. The defendant excepts to the statement in the Master's Opinion on page 53 thereof which states:

"This makes the total investment in the useful property owned by the plaintiff and in the property of other companies used by it, as of June 1, 1923, as follows:

Property of the Consolidated Gas Company	$71,578,363 14
Property of the Astoria Light, Heat & Power Company	23,331,245 86
Property of The Standard Gas Light Company	187,155 99
Property of The East River Gas Company of Long Island City	3,795,038 34
Total	$98,891,803 63,"

on the ground that the figures therein contained are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in paragraph "28" of these exceptions.

33. The defendant excepts to the statement in the Master's Opinion on page 54 thereof which states:

"This makes the investment as of December 31, 1923, the sum of $98,917,970.64, made up as follows:

Original cost of the property used in plaintiff's gas business as of June 1, 1923	$98,891,803 63
Net decrease in such property and investment June 1, 1923, to December 31, 1923	310,801 49
Total of property used in the plaintiff's gas business as of December 31, 1923	98,581,202 14
Net additions to December 31, 1923, in the property of The Astoria Light, Heat & Power Co. used in the plaintiff's gas business	336,768 50
Total investment as of December 31, 1923, inproperty used in the [fol. 384]plaintiff's gas business	$98,917,970 64."

on the ground that the figures therein contained are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof; and for the further reasons as hereinbefore set forth in paragraph "32" of these exceptions.

34. The defendant excepts to the statement in the Master's Opinion on pages 56 and 57 thereof which states as follows:

"After giving due consideration to all these factors I have reached the conclusion that it would cost to reproduce the manufacturing plant, distributing system and other tangible property owned by the plaintiff and used and useful in its gas business as of December 31, 1922, inclusive of

certain property owned by the plaintiff but used jointly with other companies, exclusive of working capital and going value and without any deduction for so-called depreciation, but after deducting the sum hereinafter stated in order to place the property in condition as if new, at least the sum of $113,282,044.64. Deducting therefrom the portion thereof used by other companies, the reproduction cost of which was the sum of $5,171,911.58, makes the reproduction cost of the tangible property owned by the plaintiff and used by it in its gas business at least the sum of $108,110,133.06,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof.

35. The defendant excepts to the statement in the Master's Opinion on page 57 which states as follows:

[fol. 385] "As to the Astoria Light, Heat & Power Company I find the reproduction cost of its property, as of December 31, 1922, to have been at least the sum of $29,762,268.36, made up as follows:

Reproduction cost of property used by plaintiff	$22,352,668 24
Less percentage of amount necessary to put property in condition when new	510,879 98
Making	$21,841,788 26
Undistributed structural costs	5,520,380 10
Working capital	2,400,000 00
Total reproduction cost, at least	$29,762,268 36,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight of the evidence for the further ground that in this finding does not give due or in deed any weight to the accrued depreciation in the property in question, and for reasons hereinbefore set forth in these exceptions.

36. The defendant excepts to the statement in the Master's Opinion on page 57 which states as follows:

"As to The East River Gas Company of Long Island City, I find that the reproduction cost of its property used by the plaintiff as of December 31, 1922, was at least $8,993,261.76, made up as follows:

Astoria Tunnel	$5,540,488 09
Ravenswood Tunnel	738,674 62
48 and 60-inch Mains in Long Island City and Astoria	653,663 18
Undistributed structural costs	2,060,435 86
Total, at least	$8,993,261 76,"

on the ground that the figures therein contained are ex- [fol. 386] cessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof.

37. The defendant excepts to the statement in the Master's Opinion on page 58 thereof which states:

"As to the Standard Gas Light Company, I find that the reproduction cost of the portion of this property used by plaintiff as of December 31, 1922, was at least $345,087.55, made up as follows:

48-inch Harlem River main	$207,718 42
62nd Street boiler and governor house	60,502 83
Undistributed structural costs	76,866 30
Total, at least	$345,087.55,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof.

38. The defendant excepts to the statement in the Master's Opinion on page 58 thereof which states:

"This makes the total reproduction cost of the property of the plaintiff and of the portion of the jointly used property used by the complainant in its gas business as of December 31, 1922, including working capital and going value, at least the sum of $159,710,750.73, made up as follows:

Property of Consolidated Gas Company	$108,110,133.06
[fol. 387] Working capital of Consolidated Gas Company	3,500,000.00
Going Value of Consolidated Gas Company	9,000,000.00
Total	$120,610,133.06
Property of Astoria Light, Heat & Power Company	29,762,268.36
Property of East River Gas Light Company of Long Island City	8,993,261.76
Property of The Standard Gas Light Company	345,087.55
Total Reproduction cost of the property used by the plaintiff as of December 31, 1922, at least	$159,710,750.73,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof.

39. The defendant excepts to the statement in the Master's Opinion on page 58 thereof which states:

"I have reached the conclusion that it would cost to reproduce the manufacturing plant distributing system and other tangible property owned by the plaintiff and used and useful in its gas business as of June 1, 1923, inclusive of certain property owned by the plaintiff and used jointly with other companies, exclusive of working capital or going [fol. 388] value, without any deduction for so-called depreciation, but after deducting the sums hereinafter stated in order to place the property in condition as if new, at least the sum of $113,642,391.54,"

on the ground that the figure therein is excessive and unreasonable, is contrary to the evidence, not supported by the evidence and against the weight thereof.

40. The defendant excepts to the statement in the Master's Opinion on pages 58 and 59 thereof which states:

"Certain of this property, however, was used by other companies, including the 48-inch connecting main in Man-

hattan and the Bronx, the 48-inch transfer main and the 36-inch distributing mains in the Bronx and the Kingsbridge holder station and certain small mains in the Bronx, and the cost to reproduce such portion as of June 1st was the sum of $3,243,676.43. This makes the reproduction cost of the tangible property owned by the plaintiff and used by it in its gas business at least the sum of $110,398,715.11,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof.

41. The defendant excepts to the statement in the Master's Opinion on page 59 thereof which states:

"I have found the cost to reproduce the portion of the manufacturing plant, distributing system and other tangible [fol. 389] property owned by the Astoria Light, Heat & Power Company but used by and useful to the plaintiff in its gas business as of June 1, 1923, inclusive of working capital, to be at least the sum of $31,041,333.66. This is without any deductions for so-called depreciation but after deducting the percentage of the amount necessary to put the property of such company in condition as when new. This amount is made up as follows:

Reproduction cost of property	$23,265,043.05
Less percentage of amount necessary to put buildings and plant in condition as when new	468,392.19
Making	$22,796,650.86
Undistributed structural costs	5,844,682.80
Working capital	2,400,000.00
Total, at least	$31,041,333.66,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof.

42. The defendant excepts to the statement in the Master's Opinion on page 59 thereof which states:

"I have also found the reproduction cost of the portion of the property of The East River Gas Company of Long Island City used by the plaintiff as of June 1, 1923, to be at least the sum of $8,266,253.52, made up as follows:

Astoria Tunnel	$5,086,537 80
Ravenswood Tunnel	678,127 61
48 and 60-inch mains in Long Island City and	
[fol. 390] Astoria	600,846 31
Undistributed structural costs	1,900,741.80
Total, at least	$8,266,253.52."

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof.

43. The defendant excepts to the statement in the Master's Opinion on page 60 thereof which states:

"I have also found the reproduction cost of that portion of the jointly used property of the Standard Gas Light Company used by the plaintiff as of June 1, 1923, to be at least the following sum:

48 inch Harlem River main	$190,692 32
62nd Street boiler and governor house	85,146 37
Undistributed structural costs	77,551 50
Total reproduction cost of property of Standard Gas Light Company used by the plaintiff, at least	$353,390 19,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof.

44. The defendant excepts to the statement in the Master's Opinion on page 60 thereof which states:

[fol. 391] "This makes the total reproduction cost of the property of the plaintiff and of the portion of the jointly used property used by the plaintiff in its gas business as of June 1, 1923, including working capital and going value, at least the following amounts:

Property of Consolidated Gas Co.	$122,898,715 11
Property of Astoria Light, Heat & Power Co.	31,041,333 66
Property of The Standard Gas Light Co.	353,390 19
Property of The East River Gas Company of Long Island City	8,266,253 52
Total reproduction cost of property used by plaintiff in its gas business as of June 1, 1923, at least the sum	$162,559,692 48,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof, and upon the further grounds hereinbefore set forth in these exceptions to the Master's Report.

45. The defendant excepts to the statement in the Master's Opinion on pages 60 and 61 thereof which states:

"Taking into consideration these changes, the reproduction cost of the property owned by the plaintiff and used in its gas business as of December 31, 1923, was and is at [fol. 392] least the sum of $115,324,589.75. During the same period The Astoria Light, Heat & Power Company made certain net additions to its property devoted to the use of the plaintiff amounting to the sum of $80,066.73, making the value of the property of that company used by the plaintiff in its gas business as of December 31, 1923, at least the sum of $31,121,400.39."

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof: and on the further ground that the Master herein has fixed the value of the property of the Astoria Light, Heat & Power Company used by the plaintiff in its gas business solely on the basis of reproduction cost as of December 31, 1923.

46. The defendant excepts to the statement in the Master's Opinion on page 61 thereof which states:

"This makes the reproduction cost of the property used by the plaintiff in its gas business, including working

capital and going value, at least the following sums as of December 31, 1923:

Property of Consolidated Gas Company	$115,324,589 75
Astoria Light, Heat & Power Co.	31,121,400 39
Standard Gas Light Co.	353,390 19
East River Gas Company of Long Island City	8,266,253 52
Total, at least	$155,065,633 85,"

[fol. 393] on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof, and for the further grounds etc.

47. The defendant excepts to the statement in the Master's Opinion on page 62 thereof which states "While the generally accepted increase over pre-war prices of labor and materials is some 60 per cent, etc." on the ground that this statement or finding is not supported by the evidence, is contrary to the evidence and against the weight thereof; and for the further reason the Master states that the underground structures have added considerably to the cost of installation of mains; whereas, said costs have not been incurred, but are problematical and based upon theoretical reproduction value; and furthermore the defendant excepts to the addition of 100% over the original cost, on the ground that such increase is excessive and unreasonable, is not supported by the evidence and is against the weight thereof.

48. The defendant excepts to the statement in the Master's Opinion on page 62 thereof which states "For the same reasons substantially I have reduced the estimate as to the replacement cost of the services," on the ground that the reduction has not been sufficient for the reasons hereinbefore set forth in the previous paragraph of these excep-[fol. 394] tions.

49. The defendant excepts to the statement in the Master's Opinion on pages 62 and 63 thereof which states:

"I have included in my estimate of the reproduction cost an amount for undistributed structural costs, which it

seems to be generally conceded necessarily accompany any undertaking of size such as this would be, but at an amount different from that testified to. I have computed this amount on a basis which is approximately the amount allowed by the Public Service Commission in this state and by other public utility bodies, and which I think should fairly cover the cost of such items,"

on the ground that the statements therein contained are not supported by the evidence, are contrary to the evidence and against the weight thereof; and for the further reason that the conclusion arrived — by the Master is not supported by the records of any Public Service Commission or other public utility bodies.

50. The defendant excepts to the statement in the Master's Opinion on page 64 thereof which states:

"There are, however, certain facts and considerations that are of weight in determining this question. The investment of the plaintiff in the properties used by it in its gas business, inclusive of franchises, working capital and going value of December 31, 1922, was at least the sum of $98,561,127.40; as of June 1, 1923, was at least the sum of $98,891,803.63, and as of December 31, 1923, at least the sum of $98,917,970.64. Its reproduction cost on December 31, 1922, was at least the sum of $159,710,750.73; on June 1, [fol. 395] 1923, was at least the sum of $162,559,692.48, and on December 31, 1923, was at least the sum of $155,065,633.85,"

on the ground that the figures therein contained are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in these exceptions to the Master's Opinion and to the exceptions of the Master's Finding.

51. The defendant excepts to the statement in the Master's Opinion on pages 64 and 65 thereof which states:

"Since the presentation of proofs, in that case, the present investment in the various properties valued by Judge Hand, adding other properties now used by plaintiff in its

gas business, has increased from $64,196,533 to at least $78,273,856.52 as of December 31, 1923, exclusive of working capital in excess of $2,000,000, and exclusive of going value and franchises. If the then present value of the properties included by Judge Hand in 1918 was $115,000,000 at that time and $14,000,000 has been added to it since then, it would make a present value of at least $129,000,000 plus the additional working capital I have found now necessary, and plus 'franchises and rights' and going value. Adding the working capital and franchises would make a value, exclusive of going value, of at least $140,281,000 at present prices, or, with going value included, of at least $149,-281,000,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the [fol. 396] evidence and against the weight thereof; and for the further reason that the opinion of Judge Hand in the prior Consolidated case speaks for itself and the interpretation attempted to be placed on it by the Master in the statement herein is not sound.

52. The defendant excepts to the statement in the Master's Opinion on page 66 thereof which states—

"and the investment, which the defendant Attorney-General claims is the sum of $94,366,337.13 or, including franchise value of $7,781,000, the sum of $102,147,337.13. The defendants also claim that no going value should be included, but if this be given the value assigned by the Special Master it would bring the investment on the defendant Attorney-General's basis to the sum of $111,-147,337.13,"

on the ground that the figures are excessive and unreasonable, are contrary to the evidence, are not supported by the evidence and against the weight thereof; and on the further ground that the statements therein contained do not fairly and correctly set forth the claim of the defendant Attorney-General as to the matters therein discussed.

[fol. 397] 53. The defendant excepts to the Master's estimate of the present value of the property as of June 1, 1923, contained in Table on pages 67 and 68 arriving at the

total figure of $134,101,738.77; and to the additional figures appearing thereafter as of December 31, 1923, on the ground that the figures are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in these exceptions to the Master's Opinion and in the defendant's exceptions to the Master's Finding; and on the further ground that the Master has incorrectly concluded that the plaintiff is entitled to a reasonable return on certain sums over and above the actual and reasonable costs of production and distribution.

54. The defendant excepts to the statement in the Master's Opinion on page 68 thereof which states:

"As to the part representing the investment prior to December 31, 1915, I have added what seems to me to be the appreciation generally agreed on as having occurred between that date and this time. The result thus obtained in connection with the other facts and figures presented in the exhibits and evidence has checked to my satisfaction the amount stated above as being the present value,"

[fol. 398] on the ground that the figures are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof; and for the further reason that the defendant is unable to ascertain what figures the Master took as representing the investment prior to December 31, 1915, or what sums he added to said figures representing his idea of the appreciation generally agreed on as having occurred between that date and this time.

55. The defendant excepts to the statement of the Master in his Opinion regarding the items deducted from plaintiff's operating expenses for the years 1922 and 1923, as appearing on page 71 of his Opinion, on the ground that said deductions did not eliminate from plaintiff's operating expenses certain accounts challenged by the defendant Attorney-General.

56. The defendant excepts to the statement in the Master's Opinion on page 72 thereof which states:

"I perhaps should say that these items should properly be included in fixing a rate by a body charged with that duty,"

on the ground that said statement is immaterial; and on the further ground that it is contrary to the principles of law involved in rate cases and on the further ground that it is no part of the duty of an officer of the Federal Government to instruct the legislative authorities of the sovereign State of New York.

57. The defendant excepts to the statement in the Mas- [fol. 399] ter's Opinion on page 73 thereof which states:

"I find that the total cost of the production of all the gas made and purchased by the plaintiff for the year 1922 was the sum of at least $11,275,662.90, or at least 51.09 cents per thousand cubic feet made. The unaccounted for gas being 6.42 per cent makes the cost of production of the gas sold at least 54.79 cents per thousand cubic feet. The elimination of the items of distribution I have set forth reduced the cost of distribution from $6,522,119.55 or 31.69 cents per thousand cubic feet to at least $6,253,852.47 or at least 30.39 cents per thousand cubic feet. The tax items, the interest on unpaid taxes and retirement expense omitted reduced these accounts to the extent of $1,007,501.52, making the total cost of production, distribution, etc., at least $20,121,452.47 or at least 97.77 cents per thousand cubic feet. I have also eliminated from the miscellaneous operating revenues interest on bank balances, which reduces this item from $1,964,104.77 to $1,916,924.48 or 9.31 cents per thousand cubic feet, and makes net operating expenses of at least $18,204,527.99, or at least 88.46 per thousand cubic feet,"

on the ground that the figures therein contained are excessive and unreasonable; and on the further ground that the standard of testing the statute in so far as the cost of production is concerned should have been upon the basis of the reasonable cost as reflected in the efficient plant at Astoria as adopted by Judge Hand in the prior case.

[fol. 400] 58. The defendant excepts to the statement in the Master's Opinion on page 73 thereof wherein he finds the net income of 11.40 cents per thousand cubic feet on the basis of the quality of gas actually furnished; and also a similar finding for the year 1923 found on pages 74 and 75 of the Master's Report wherein a net income of not more than 16.92 cents per thousand cubic feet was found; and also to a similar finding for 1923 based on the price as of May 1924, finding the net income of not more than 18.76 cents per thousand cubic feet, upon the ground that the said findings are contrary to the evidence, not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore specifically set forth in these exceptions and the exceptions to the Master's Findings.

59. The defendant excepts to the statement in the Master's Opinion on page 74 thereof which states as follows:

"On the basis of 650 B. t. u. gas as prescribed by Chapter 899 of the Capital Laws of 1923, the cost of operation would have been increased at least $648,279.00 or 3.15 cents per thousand cubic feet and the net income decreased to not more than $1,698,078.18 or 8.25 cents per thousand cubic feet sold."

on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof.

[fol. 401] 60. The defendant excepts to the statement in the Master's Opinion on page 74 thereof wherein he finds the net operating expenses to be at least $19,952,915.95 or 82.94 cents per thousand cubic feet, on the ground that the figures therein found are excessive and unreasonable, contrary to the evidence, not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in these exceptions and the exceptions to the Master's Report.

61. The defendant excepts to the statement in the Master's Opinion on page 75 thereof wherein he finds for the year 1923 a net income of $4,072,181.08 or 16.92 cents per thousand cubic feet on the ground that the same is not sup-

ported by the evidence, is contrary to the evidence and against the weight thereof; and for the further reasons hereinbefore set forth as exceptions to the Master's Opinion and Findings upon a similar item for the year 1922.

62. The defendant excepts to the statement in the Master's Opinion on page 75 thereof wherein it is stated:

"On the basis of 650 B. t. u. gas as prescribed by the statute, the cost of operation would have been increased at least $1,248,594.33 or 5.19 cents per thousand cubic feet, and the net income decreased to not more than $2,823,586.75 or 11.73 cents per thousand cubic feet sold,"

on the ground that the figures therein contained are excessive and unreasonable and on the further ground that [fol. 402] the standard of testing the statute insofar as the cost of production is concerned should have been upon the basis of the reasonable cost as reflected in the efficient plant at Astoria as adopted by Judge Hand in the prior case.

63. The defendant excepts to the statement in the Master's Opinion on page 75 wherein he finds the net operating expenses of the plaintiff to be at least $19,569,869.56 or 81.10 cents per thousand cubic feet for the year 1923 on the basis of the prices of May 1924, on the ground that the figures therein contained are excessive and unreasonable, are contrary to the evidence, not supported by the evidence and against the weight thereof; and for the further reasons hereinbefore set forth in paragraph "58" of these exceptions to the Master's Opinion.

64. The defendant excepts to the Master's Finding of net income based upon 650 B. t. u. found on pages 75 and 76 of the Master's Opinion, for the reasons hereinbefore set forth in these exceptions, particularly paragraph marked "58" of these exceptions.

65. The defendant excepts to the statement of the Master's Opinion found on page 76 thereof which states:

[fol. 403] During the same period and on the same basis of prices and elimination it cost the Consolidated System

Companies for the production and distribution of gas sold by them, and they had net income as follows:

Year	Operating costs, cts. per M	Net income	Income, cents per M
1922	85.49	$4,716,503.84	17.96
1923	82.63	6,426,725.26	17.29
1923 (at present prices)	80.76	8,736,947.67	19.69

On the basis of supplying gas of not less than 650 B. t. u. as prescribed by the statute, the result would have been as follows:

1922	89.01	$3,672,121.87	10.81
1923	87.82	4,189,509.50	12.03
1923 (at present prices)	85.78	5,251,849.33	14.07

on the ground that the statement and figures therein contained are not supported by the evidence, are contrary to the evidence and against the weight thereof; and further for the reasons hereinbefore set forth in the exceptions to both the Report and Opinion of the Master upon the questions of operating costs, net income and income per thousand cubic feet both as to gas made and as to 650 B. t. u. gas; and upon the further ground that the operating costs shown therein are not the operating or reasonable costs of the plaintiff company but are the average operating costs of the plaintiff company and its affiliated companies, and are not the operating or reasonable costs of the plaintiff for the purpose of a rate case.

[fol. 404] 66. The defendant excepts to the statement contained in the Master's Opinion on page 77 thereof as follows:

"The facts here found have a comparative bearing, however, upon the reasonableness or unreasonableness of the costs and operations of the plaintiff, as the results of the entire system approximate very closely the costs of the gas furnished by the plaintiff, and tend to confirm the reasonableness of the inter-company charges for the services rendered by the Consolidated Gas Company to affiliated companies and the charges for joint operations of certain properties and facilities. The presentation of the combined revenues and expenses for all of the companies on

the transfer sytsem tends also to negative any possible suggestion that any one company is favored, or that any other company is unduly burdened, so as to make the costs of any one company either too high or too low,"

on the ground that the plaintiff company is most favorably situated and is possessed of the most favorable and lucrative gas territory, and for that reason its revenues ought to be materially higher and its expenses materially lower than the corresponding revenues and expenses of the affiliated companies not so favorably situated.

67. The defendant excepts to the statement contained in the Master's Opinion on page 78 thereof wherein it is stated:

"His expert, Mr. Little, presented an estimate of such costs for the nominal year April 1, 1924, to April 1, 1925. Upon cross-examination it developed that Mr. Little was in error in a number of particulars in his estimate of the [fol. 405] cost of making coal gas, and he frankly admitted that it would be necessary in any event to increase his estimated cost at each coal gas plant something over four cents per thousand cubic feet. His estimated cost of production at the water gas plants had also to be increased somewhat for the same reason."

on the ground the statements therein contained are not in accordance with the evidence, are contrary to the evidence and against the weight thereof.

68. The defendant excepts to the statements in the Master's Opinion found on pages 78 and 79 wherein it is said that the operating officials at Astoria have in many ways favored the A house at the expense of the B house and further that the A house has always had the best specially selected coal furnished it, while B house took the poorer grade. If these differences actually existed they would make little if any difference between the operations of the two houses. However these statements are not supported by the evidence, are contrary to the evidence and against the weight thereof.

69. The defendant excepts to the statement contained in the Master's Opinion of page 81 thereof which states:

"While the evidence showed that combined coal and water gas production at Astoria was less than the water gas production in the Manhattan plants, it was also shown [fol. 406] that the combined coal and water gas plants at Astoria reflected a greater investment per M cubic feet of daily capacity than the investment cost in the water gas plant in Manhattan, and that when consideration was given to the additional cost of this increased investment in daily plant capacity, there was little or no difference in the production cost between Astoria and Manhattan plants,"

on the ground that the Master should have followed Judge Hand as to production cost at the most efficient plant, regardless of investments per M cubic feet either in the Astoria plant or other plants of the plaintiff company.

70. The defendant excepts to the statement contained in the Master's Opinion of pages 81 and 82 thereof which states:

"In view of the fact that when everything properly chargeable to the cost of manufacturing is taken into consideration there is but slight difference in the cost of production between the various manufacturing units of the company on Manhattan and at Astoria and that the proof is that the plant- are operated efficiently and economically and contain up-to-date machinery and equipment, and their working condition is of a high order I see no reason for refusing to base the cost of operation on the cost of producing the entire amount of gas sold by the plaintiff no matter where manufactured,"

on the ground the statements therein contained are contrary to the evidence, are not supported by the evidence and against the weight thereof and on the further ground that plaintiff in such a case as this should be held to the reasonable cost of production at its most efficient plant.

[fol. 407] 71. The defendant excepts to the Master's Opinion upon the matter of accrued depreciation found on page 63 thereof on the ground that the said statement contained therein is contrary to the established principles of law involved.

72. The defendant excepts to the Master's Opinion upon the question of "Return" found on pages 83, 84, 85, 86, 87 and 88 of the Master's Opinion for the reasons and upon the grounds hereinbefore set forth in these exceptions, and more specifically for the further reasons set forth in paragraphs "64", "65", "66", "67" and "68", of the defendant's exceptions to the Master's Findings; and on the further ground that the statement made on page 87 regarding the action of the Public Service Commission of the State of New York does not show or take into account that the cost of the gas at the time the Order of the Commission was made and filed was higher than at the time of the trial of the instant case.

73. The defendant excepts to the statements contained in the Master's Opinion upon the item "Rate of Return" on pages 89, 90, 91 and 92 thereof, wherein he concludes that 8% is a fair, reasonable and proper rate of return upon [fol. 408] the so-called present value of the plant, upon the grounds and for the reasons hereinbefore set forth, and upon the further ground that said statement is contrary to law.

74. The defendant excepts to the statement in the Master's Opinion found on pages 93, 94, 95, 96, 97 and 98 upon the topic "Judge Hand's Opinion" on the ground that the opinion of the Court speaks for itself and so far as its binding force and effect is concerned should be considered in this litigation as a precedent to be followed with the usual force and effect as any adjudicated question by a similar court.

75. The defendant excepts to that part of the Master's Opinion found on page 99 as follows:

"As to this last contention I was of the opinion that it was separable from the price fixing provision of the statute, and so held in the case of the New York & Queens Gas Company and in the case of The Bronx Gas & Electric Company. The District Court, in passing upon the Special Master's report in those cases was of a different opinion, and I therefore must and do regard it as the law of this case that the rate and standard provision is not separable,"

on the ground that the statement therein found that the rate and standard provision of the statute is not separable, [fols. 409-411] places an erroneous construction upon the said statute, which is contrary to the established principles of law involved.

76. The defendant excepts to the statement contained in the Master's Opinion upon the question "The statute as affecting the order of August 30, 1922, of the Public Service Commission as accepted and put into effect by the plaintiff" found on pages 101, 102, 103 and 104 of the Master's Opinion, particularly wherein the Master finds that the action of the Legislature in passing the statute under review was a violation of Section 10, Article 1 of the Constitution of the United States, upon the ground that the findings of fact and conclusions of law therein contained are not a proper interpretation of the said statute and are contrary to the principles of law involved. The Master should have found that no contract existed between the plaintiff company and the Public Service Commission such as would make the provisions of chapter 899 of the Laws of 1923 violative of or in contravention of the plaintiff's constitutional guarantees under Section 10 of Article 1 of the Constitution of the United States.

Dated February 4th, 1925.

Respectfully submitted.

Albert Ottinger, Attorney-General of the State of New York. Office & P. O. Address: Capitol, Albany, N. Y. John Holley Clark, Jr., Solicitor for Defendant Albert Ottinger, Attorney-General of the State of New York. Office & P. O. Address: No. 49 Chambers Street, Borough of Manhattan, New York City. John Holley Clark, Jr., Charles E. Buchner, Wilber W. Chambers, of Counsel.

[fol. 412] In United States District Court

[Title omitted]

Notice of Filing of Exceptions of Wm. A. Prendergast et al. to Report and Opinion of Special Master

Please take notice that the within exceptions of the defendants, William A. Prendergast, et al., constituting the Public Service Commission of the State of New York, to the report and opinion of the Special Master herein, were filed in the office of the Clerk of the United States District Court for the Southern District of New York, on the 4th day of February, 1925.

Yours, etc., Charles G. Blakeslee, Solicitor for Defendants, William A. Prendergast et al., 30 Church Street, New York City.

Dated New York, February 4, 1925.

To Shearman & Sterling, Solicitors for Plaintiff, 55 Wall Street, Borough of Manhattan, City of New York; Albert Ottinger, Esq., Attorney General, State of New York; John Holley Clark, Solicitor for Attorney General, 51 Chambers Street, Borough of Manhattan, City of New York.

[fol. 413] In United States District Court

[Title omitted]

Exception of the Defendants, William A. Prendergast et al.—February 4, 1925

Now come the defendants William A. Prendergast, William R. Pooley, Charles Van Voorhis, Oliver C. Semple and George R. Van Namee, constituting the Public Service Commission of the State of New York, and except to the opinion, findings of fact and conclusions of law contained in the report filed herein by James G. Graham, Esq., Special Master, on January 15, 1925, in the following particulars, to-wit:

[fol. 414] First. The defendants except to that part of Finding No. 12 herein as to the amount of excess capacity

required by the Consolidated Gas Company, on the ground that the excess capacity so found is excessive, it appearing that the plants of the Consolidated Gas Company itself are not used to capacity.

Second. The defendants except to that part of Finding No. 13 herein as to the amount of the plant capacity and facilities of the Astoria Light, Heat and Power Company required by the Consolidated Gas Company, on the ground that such finding is excessive, it appearing that the plants of the Consolidated Gas Company itself are not used to capacity.

Third. The defendants except to Finding No. 14 herein, insofar as it indicates the extent of the proper use of the facilities mentioned therein.

Fourth. The defendants except to Finding No. 34 herein insofar as it holds or assumes that the Public Service Commission has no power to reduce the standard of gas below 650 British Thermal Units per cubic foot, on the ground that the Public Service Commission is possessed of such power under subdivision 3 of Section 66 of the Public Service Commission Law.

Fifth. The defendants except to that part of Finding No. 49 insofar as it states the extent of the requirements of the purchase of outside gas and the use of inside facilities and plant capacity, on the ground that such finding is excessive.

Sixth. The defendants excepts to that part of Finding [fol. 415] No. 55 in which it is found that a reserve manufacturing plant capacity of from 20 per cent to 25 per cent of the plaintiff's actual maximum day's requirements is reasonable and necessary, on the ground that such finding is excessive.

Seventh. The defendants except to that portion of Finding No. 56 with reference to the purchase by plaintiff shortly after June 1, 1923 of a large tract of land at Hunts Point, in the Borough of the Bronx, New York City, which states in substance that such land was necessary to enable the plaintiff to provide additional manufacturing capacity, that the purchase of such land was prudent and reasonably nec-

essary for the immediate and prospective requirements of the plaintiff's gas business and that of the system companies, and that the plaintiff commenced the construction of a substantial manufacturing unit upon the said parcel, to be available for use in 1925, upon the ground that there is no evidence to support it, and it is contrary to the evidence, and upon the further ground that even assuming that the purchase of the land was necessary for the requirements of the plaintiff's gas business "and that of the system companies," (including presumably Bronx companies as well as Manhattan companies), such land should not be considered in the present suit unless the extent of the use thereof by the "system companies" is ascertained, which has not been done.

Eighth. The defendants except to Finding No. 62 herein that the evidence in this case "affords no ground for expecting that the prices of material and wages paid for labor entering into the manufacture of gas will, on the whole, be [fol. 416] reduced from the wages and prices now being paid by the plaintiff," on the ground that the same is speculative, and an unnecessary prophecy, not supported by the evidence, and contrary to the Master's own finding that there has been a constant decrease in the cost of producing gas from 1922 to December 31, 1923. (See Findings Nos. 67 and 68).

Ninth. The defendants except to Finding No. 66 herein, on the ground that the same is based upon an excessive proportion of the plants and facilities of other companies, and an excessive rate of return thereon.

Tenth. The defendants except to Finding No. 71 herein as to the market value as of June 1, 1923 of land (unimproved) owned by the plaintiff and stated to be used and useful in its gas business, upon the ground that it is excessive and based upon an improper and illegal theory of valuation, and upon the further ground that some of the parcels included in such finding were not and are not used and useful in the plaintiff's gas business.

Eleventh. The defendants except to Finding No. 72 herein in which it is found that the cost to reproduce the manufacturing plant, distributing system and other tangi-

ble property owned by the plaintiff and used and useful in its gas business, as of June 1, 1923, inclusive of certain property owned by the plaintiff and used jointly with other companies, based upon the unit prices of labor and material prevailing as of that time and as of the time of the hearings herein, exclusive of working capital and of going value, was and is, without any deduction for depreciation, at least the sum of $113,642,391.54, upon the ground that [fol. 417] said finding is based chiefly upon reproduction cost new as of the present time without any deduction for depreciation, and in all such respects is excessive, improper and illegal and based upon an illegal theory of valuation, and upon the further ground that included in such valuation are numerous parcels of property not used and useful in the public service.

Twelfth. The defendants except to Finding No. 74 herein in which it is found that the reasonable and necessary working capital of the plaintiff is at least $3,500,000, upon the ground that said finding is excessive.

Thirteenth. The defendants except to that part of Finding No. 75 herein in which it is found that "the reasonable and necessary going value of the plaintiff in its gas business, as of June 1, 1923, and of the present time, was and is, at least the sum of $9,000,000," upon the ground that such finding is improper and illegal and there is no evidence to support it, and such finding is at variance with the decisions of the United States Supreme Court in former cases affecting the rates of this company, which decision are res adjudicata against the plaintiff upon this point (Willcox v. Consolidated Gas Co., 212 U. S. 19; Newtown v. Consolidated Gas Company, 258 U. S. 165), and also at variance with the decisions of the United States Supreme Court in Galveston Electric Co. v. Galveston, 258 U. S. 388.

Fourteenth. The defendants except to that part of Finding No. 75 herein in which it is stated that:

"No testimony was presented by the defendants' witnesses as to the amount or method of computation of the going value of the plaintiff, as of June 1, 1923, or the present time,"

[fol. 418] upon the ground that said finding assumes that "going value" necessarily exists and inferentially criticises the defendants' counsel for not presenting evidence with respect thereto; whereas, as a matter of fact, the defendants contend that the plaintiff is not entitled to anything for "going value," that no evidence of "going value" could be presented; and that none of the evidence presented by the plaintiff supports its claim for "going value" or justifies any allowance thereof; and in fact that "going value" was expressly disallowed by the United States Supreme Court in cases referred to in Exception Thirteenth, supra.

Fifteenth: The defendants except to Finding No. 76 herein in which it is found that the cost to reproduce the manufacturing plant, distributing system and other tangible property owned by the plaintiff, used and useful in its gas business, as of June 1, 1923, inclusive of working capital and going value, was as of June 1, 1923, at least the sum of $122,898,715.11, upon the ground that said finding is based chiefly upon reproduction cost new as of June 1, 1923 without any deduction for depreciation and in all such respects is excessive, improper and illegal and based upon an illegal theory of valuation; and upon the further ground that included in such valuation are numerous parcels of property not used and useful in the public service, that included in such valuation is the sum of $9,000,000, erroneously allowed for alleged investment in "going value," and that included in such valuation is the sum of $3,500,000 for working capital, which allowance is palpably improper and excessive.

Sixteenth. The defendants except to Finding No. 77 herein in which it is found that the cost to reproduce the portion of the manufacturing plant, distributing system [fol. 419] and other tangible property owned by the Astoria Light, Heat and Power Company used and useful to the plaintiff in its gas business, as of June 1, 1923, based upon the unit prices of labor and material prevailing as of that time and as of the time of the hearings herein inclusive of working capital, was and is, without any deduction for depreciation, at least the sum of $31,041,333.66, upon the ground that said finding relates to an excessive proportion of the property of said Astoria Light, Heat and Power Com-

pany, and is based chiefly upon reproduction cost new without any deduction for depreciation, and in all such respects is excessive, improper and illegal and based upon an illegal theory of valuation, and upon the further ground that included in such valuation is a large tract of land not used and useful in the public service, and that included in such valuation is the sum of $2,400,000 for working capital for the Astoria Company, none of which should be allowed in a case involving the rates of the plaintiff herein.

Seventeenth. The defendants except to Finding No. 78 herein in which it is found that the plaintiff necessarily and reasonably used, as of June 1, 1923, and still uses in the service of its consumers certain other property owned by the East River Gas Company of Long Island City, and that the reproduction cost of the portion so stated to be used as of June 1, 1923, based upon unit prices of labor and material prevailing as of that time, and as of the time of the hearings herein, was and is at least the sum of $8,266,253.52, upon the ground that the portion of said property said to be used by the plaintiff is excessive, and upon the further ground that said finding is based chiefly upon reproduction cost new as of the present time with-
[fol. 420] out any deduction for depreciation, and in all such respects is excessive, improper and illegal and based upon an illegal theory of valuation.

Eighteenth. The defendants except to the Finding No. 79 herein in which it is found that the plaintiff also necessarily and reasonably used as of June 1, 1923, and still uses, in the service of its consumers, certain other property owned by the Standard Gas Light Company, and that the reproduction cost of the property so used, as of June 1, 1923, based upon unit prices of labor and material prevailing as of that time, and as of the time of the hearings herein, was and is at least the sum of $353,390.19, upon the ground that the portion of said property said to be used by the plaintiff is excessive, and upon the further ground that said finding is based chiefly upon cost of reproduction new as of the present time without any deduction for depreciation, and in all such respects is excessive, improper and illegal and based upon an illegal theory of valuation.

Nineteenth. The defendants except to Finding No. 80 herein in which it is found that the cost to reproduce the manufacturing plant, distributing system, and other property used by the plaintiff in its gas business, as of June 1, 1923, based upon the prices of materials and labor prevailing at that time, and as of the time of the hearings herein, including both the property owned by the plaintiff and used in its gas business and the property of other companies devoted to the use of the plaintiff in the service of its consumers, was and is, without any deduction for depreciation, at least the sum of $162,559,692.48, upon all the grounds stated in exceptions to Findings Nos. 71 to 79, both [fol. 421] inclusive, supra.

Twentieth. The defendants except to Finding No. 82 herein in which it is found that the reproduction cost of the property owned by the plaintiff and used and useful in its gas business, was as of December 31, 1923, and is as of the present time, at least the sum of $115,324,589.75, upon all the grounds stated in exceptions to Findings Nos. 71 to 76 herein, both inclusive, supra.

Twenty-first. The defendants except to Finding No. 84 herein in which it is found that the reproduction cost of the property used by the plaintiff in its gas business, including the property owned by the plaintiff and the property of other companies devoted to the use of the plaintiff in the service of its consumers, was as of December 31, 1923, and is, as of the present time, at least the sum of $155,065,633.85, upon all the grounds stated in exceptions to Findings Nos. 71 to 83, both inclusive, supra.

Twenty-second. The defendants except to that portion of Finding No. 86 herein in which it is found that the original cost to the Astoria Light, Heat and Power Company of its property used and useful in its gas business as of December 31, 1922, as shown by the books of account, exclusive of working capital, was and is at least the sum of $25,769,744.29, upon the ground that included in said finding is a large parcel of real estate admittedly not used and useful in the gas business.

Twenty-third. The defendants except to that portion of Finding No. 86 herein in which it is found that the working [fol. 422] capital reasonably required by the Astoria Light,

Heat and Power Company for the conduct of its business was at least the sum of $2,550,000, on the ground that said sum is excessive, and furthermore, that such finding is wholly immaterial to the issues of this case.

Twenty-fourth. The defendants except to that part of Finding No. 86 herein in which it was found that the actual investment by the Astoria Light, Heat and Power Company in that portion of its property devoted to the use of the plaintiff in its gas business amounted on December 31, 1922 to $24,734,332.97, and in which it was found that such investment in property of the plaintiff was reasonable and necessary to meet the demands of its consumers, upon the ground that the amount as found is excessive and that such investment in property was not necessary to the plaintiff to meet the demands of its customers.

Twenty-fifth. The defendants except to Finding No. 87 herein, upon the ground that the respective portions of the properties of the companies therein referred to, said to be used by the plaintiff in its gas business, are excessive.

Twenty-sixth. The defendants except to Finding No. 88 herein in which it is found that the original cost of the manufacturing plant, distributing system and other tangible property actually used by the plaintiff in its gas business as of December 31, 1922, including the investment of plaintiff in its property so used and investment of the Astoria Light, Heat and Power Company, the Standard Gas Light Company and the East River Gas Company of Long Island City, in the respective properties owned by those companies and devoted to the use of the plaintiff in the [fol. 423] service of its consumers, inclusive of going value, amounted to at least the sum of $98,561,127.40, upon the following grounds:

(1) That the allowance to the Consolidated Gas Company of New York for working capital is excessive.

(2) That there is no evidence to support a finding of $9,000,000, or any other amount, for "going value," and in fact the Master has made no such finding as of December 31, 1922. Furthermore, that any finding of any amount for "going value" for the plaintiff herein is erroneous for reasons stated in exceptions Thirteenth and Fourteenth, supra.

(3) That the amounts included for properties of other companies devoted to the use of the Consolidated Gas Company of New York are excessive, for reasons stated in exceptions to previous findings in respect of such amounts.

(4) That included in the amount of $57,006,798.32 (Consolidated Gas Company) are properties not used and useful in the public service.

Twenty-seventh. The defendants except to Finding No. 89 herein in which it is found that the original cost to the plaintiff of its property used and useful in its gas business, as of June 1, 1923, as shown by its books of account, exclusive of expenditures made but not charged to fixed capital for interest during construction, engineering and superintendence and other undistributable structural costs, and exclusive of working capital and going value, was at [fol. 424] least the sum of $59,078,363.44, on the ground that said item includes parcels of property not used and useful in the public service and is therefore excessive.

Twenty-eighth. The defendants except to Finding No. 90 herein, on the following grounds:

(1) That the amount stated to be the original cost to the Astoria Light, Heat and Power Company of its property used and useful in the gas business, as of June 1, 1923, as shown by its books of account, exclusive of working capital, is excessive, in that there is included in said amount the cost of property not used and useful in the gas business.

(2) That the amount stated to be the actual investment in that portion of said property said to be devoted to the use of the plaintiff in its gas business, is excessive, and not reasonable and necessary to the plaintiff to meet the demands of its consumers.

(3) That the amount found to be reasonably required by said Astoria Light, Heat and Power Company for working capital, is excessive, and is also immaterial to the issues in this case.

Twenty-ninth. The defendants except to Finding No. 91 herein, on the ground that in making such finding the Master has assumed an excessive proportionate amount of the

properties of the East River Gas Company of Long Island City and the Standard Gas Light Company, respectively, said to be used by the plaintiff in its gas business.

[fol. 425] Thirtieth. The defendants except to Finding No. 92 here, upon the following grounds:

(1) That the amount said to represent the original cost of the property of the Consolidated Gas Company of New York (Fixed Capital) is excessive in that it includes certain properties not used and useful by the plaintiff in its gas business.

(2) That the amount included in said finding for working capital is excessive.

(3) That the amount included in said finding for "going value" is improper and illegal for reasons set forth in exceptions Nos. Thirteenth and Fourteenth herein.

(4) That the amounts said to represent properties of other companies said to be devoted to the use of the plaintiff are excessive for reasons set forth in previous exceptions herein relative to the portions of the properties of such companies said to be used by the plaintiff.

Thirty-first. The defendants except to Finding No. 94 herein, on the following grounds:

(1) That the amount set forth therein as representing the original cost of the plaintiff's property used in its gas business as of December 31, 1923 is excessive in that there is improperly included therein at least the sum of $200,000 representing the cost of land at Cromwell Avenue and Exterior Street, and $500,000 representing part of the cost [fol. 426] of land at Hunts Point, neither of which parcels was used and useful by the plaintiff in its gas business.

(2) That the amount allowed for working capital is excessive and should be substantially reduced.

(3) That the amount allowed for "going value" is improper and illegal for reasons hereinbefore stated, and should be wholly eliminated. (See exceptions Thirteenth and Fourteenth.)

Thirty-second. The defendants except to Finding No. 96 herein in which it is found that the original cost of all the

property used by the plaintiff in its gas business (including the property of other companies) as of December 31, 1923, was at least the sum of $98,917,970.64, on the following grounds:

(1) That in the cost of the plaintiff's property there is improperly included at least $700,000, $200,000 of which represents the cost of property at Cromwell Avenue and Exterior Street and $500,000 of which represents part of the cost of property at Hunts Point, neither of which parcels was used and useful in the gas business.

(2) That included in said amount is the sum of $9,000,000 for "going value", which is without evidence to support it, and is improper and illegal for reasons set forth in exceptions Thirteenth and Fourteenth, supra.

(3) That included in said amount is $3,500,000 for working capital for the plaintiff, which allowance for working [fol. 427] capital is excessive.

(4) That included in said amount is $2,400,000 for working capital for the Astoria Light, Heat and Power Company the allowance of which was wholly improper in a suit involving solely the rates of the Consolidated Gas Company of New York.

Thirty-third. The defendants except to Finding No. 96 herein in which it is found that the present value of the manufacturing plant, distributing system and other tangible property owned by the plaintiff and used and useful in its gas business as of June 1, 1923, inclusive of certain properties owned by the plaintiff and used jointly with other companies, based upon the unit prices of labor and material prevailing at that time, and as of the time of the hearing herein, exclusive of working capital and of "going value", was at least the sum of $90,047,110.61, upon the ground that such valuation includes properties not used and useful in the public service and is based chiefly upon reproduction cost new at present day prices, which is an unfair, improper and illegal basis upon which to compute a rate base.

Thirty-fourth. The defendants except to Finding No. 98 herein upon the grounds last above stated in connection with Finding No. 97, and also upon the grounds hereinbefore

stated in connection with findings as to working capital and "going value."

Thirty-fifth. The defendants except to Finding No. 99 herein as to the present value of the portion of the manufacturing plant, distributing system and other tangible property owned by the Astoria Light, Heat and Power [fol. 428] Company used by and useful to the plaintiff in its gas business as of June 1, 1923, based upon the unit prices of labor and materials prevailing as of that time and as of the time of the hearings herein, inclusive of working capital, upon the grounds:

(1) That said finding was based chiefly upon reproduction cost new at present day prices without any deduction for depreciation, which is an unfair, improper and illegal basis upon which to compute a rate base, especially in a case of this kind, and

(2) That included in the amount so found is the sum of $2,400,000 for working capital for the Astoria Company, which is improperly included in a suit involving only the rates of the Consolidated Gas Company of New York.

Thirty-sixth. The defendants except to Finding No. 100 herein, upon the ground that said finding is based chiefly upon reproduction cost new at present day prices and in all such respects is improper and illegal and based upon an illegal theory of valuation.

Thirty-seventh. The defendants except to Finding No. 101 herein, upon the same grounds last above stated in connection with Finding No. 100.

Thirty-eighth. The defendants except to Finding No. 102 herein in which it is found that the present value of the manufacturing plant, distributing system and other property used by the plaintiff in its gas business as of June 1, 1923, based upon the prices of material and labor prevail- [fol. 429] ing at that time and as of the time of the hearings herein, including both the property owned by the plaintiff and used in its gas business and the property of other companies devoted to the use of the plaintiff in the service of its consumers, was $134,101,738.77, upon the following grounds:

(1) That said valuation is based chiefly upon reproduction cost new at present day prices without any deduction for depreciation, and in all such respects is unfair, improper and illegal and based upon an illegal theory of valuation.

(2) That included in the property of the plaintiff so valued as aforesaid, are parcels of land not used and useful in the gas business.

(3) That included in such valuation is the sum of $9,000,000 for "going value" which is without evidence to support it and is improper and illegal for reasons hereinbefore given in connection with Finding No. 75.

(4) That included in such valuation is the sum of $3,500,000 for working capital, which is an improper and excessive allowance for that item.

(5) That included in the valuation of the property of the Astoria Light, Heat and Power Company is the sum of $2,400,000 for working capital, which is wholly improper in the present case which affects only the rates of the Consolidated Gas Company.

[fol. 430] Thirty-ninth. The defendants except to Finding No. 103 herein on the same grounds stated in exception Thirty-eighth to Finding No. 102.

Fortieth. The defendants except to Finding No. 104 herein upon the same grounds stated in exception Thirty-eighth to Finding No. 102.

Forty-first. The defendants except to Finding No. 105 herein upon the same grounds stated in exception Thirty-eighth to Finding No. 102.

Forty-second. The defendants except to that part of Finding No. 106 herein in which it is found that the plant, machinery and equipment owned by the plaintiff and used in its gas business, and the plant, machinery and equipment owned by the affiliated gas companies used by the plaintiff in its gas business, "are now in as high a state of efficiency for the economical production of gas as if new," upon the ground that such finding is not supported by the

evidence, is contrary to reason and to common sense, and is absurdly untrue.

Forty-third. The defendants except to that part of Finding No. 107 herein in which it is found that the reasonable and proper rate of return upon the present value of the plant, distributing system and other properties owned by the plaintiff and its affiliated gas companies, and used and useful in the plaintiff's gas business is not less than eight (8) percent per annum, upon the ground that such finding is not supported by the evidence and is excessive and unreasonable and is at variance with the decisions of the United States Supreme Court in Willcox v. Consolidated Gas Co., 212 U. S. 19 and Newton v. Consolidated Gas Co., 267 Fed. Rep. 231; 259 U. S. 165, in which it was held that a rate will not be declared confiscatory which provides a [fol. 431] return of not exceeding 6 percent, upon the fair value of the property used by plaintiff in its gas business; which decisions are res adjudicata against the plaintiff upon the point in question.

Forty-fourth. The defendants except to Finding No. 108 herein which purports to show the effect of the enforcement of Chapter 899 of the Laws of 1923 upon the operations of the plaintiff during the year 1922, based upon the property used by the plaintiff in its gas business, as of December 31, 1922, including both the property owned by it and the property of other companies used by it, upon the ground that in making such computations the Master has used the alleged "reproduction cost" of such property and the alleged "actual investment" in such property as of December 31, 1922, hereinbefore mentioned, which "reproduction cost" and "actual investment" are respectively improper and excessive for reasons hereinbefore stated in connection with the several findings relating to such properties.

Forty-fifth. The defendants except to Finding No. 109 herein which purports to show the effect of the enforcement of Chapter 899 of the Laws of 1923 upon the operations of the plaintiff during the year 1923 based upon the property actually used by the plaintiff in its gas business, as of June 1, 1923 and as of December 31, 1923, including both the property owned by it and the property of other companies used by it, upon the ground that in making such alleged

"reproduction cost" as of each of said dates, the alleged "investment cost" as of each of said dates, and the alleged "present value" of the property as of each of said dates, which "reproduction cost" "investment cost" and "pres-
[fol. 432] ent value" are respectively improper and excessive for reasons hereinbefore stated in connection with the several findings relating thereto.

Forty-sixth. The defendants except to Finding No. 110 herein which purports to show the effect of the enforcement of the $1.00 rate prescribed by Chapter 899 of the Laws of 1923 upon the operations of the plaintiff for the year 1925, based upon the present cost of manufacture and distribution of the gas supplied to its consumers, computed upon the basis of the elimination from the plaintiff's operating expenses of all return actually paid by the plaintiff upon the property of the affiliated gas companies devoted to the use of the plaintiff, and of adding such property to the rate base, upon the ground that in making such computations the Master has used the alleged "investment cost," "reproduction cost" and "present value" of such property as of June 1, 1923 and as of December 31, 1923, hereinbefore mentioned, which "investment cost," "reproduction cost" and "present value" are respectively improper and excessive for reasons hereinbefore stated in connection with the several findings relating thereto.

Forty-seventh. The defendants except to that part of Finding No. 112 herein in which it is stated that the plaintiff's investment in its own property used in its gas business as of June 1, 1923 was the sum of $71,578,363.44, and as of December 31, 1923, $71,267,761.95; that the reproduction cost of such property as of June 1, 1923 was $122,898,715.11 and that the present value of such property as of June 1, 1923 was $99,303,434.19, and as of December 31, 1923, $94,882,-312.45, upon the ground that said amounts are respectively improper and excessive for reasons hereinbefore set forth in connection with the several findings relating thereto.

[fol. 433] Forty-eighth. The defendants except to that part of Finding No. 112 herein which purports to show the effect of the enforcement of the $1.00 rate prescribed by Chapter 899 of the Laws of 1923, if applied to the actual operations of the plaintiff for the year 1923, upon the

ground that in making his computations the Master has used the alleged "reproduction cost" of the property as of June 1, 1923 and as of December 31, 1923; the alleged "investment cost" as of each of said dates and the alleged "present value" as of each of said dates, hereinbefore mentioned, which "reproduction cost," "investment cost" and "present value" are respectively improper and excessive for reasons hereinbefore set forth in connection with the several findings relating thereto.

Forty-ninth. The defendants except to Finding No. 113 herein on the ground that said finding assumes that the provisions of Chapter 899 of the Laws of 1923 as to the standard of gas to be furnished, and the provisions thereof as to the rate, are not separable, an assumption which, the defendants submit, is erroneous.

Fiftieth. The defendants except to Finding No. 114 herein in which it is found that Chapter 899 of the Laws of 1923 in respect of the standard of gas to be furnished is an unlawful and unconstitutional exercise of legislative power, on the ground that the provisions of said statute should be read in connection with subdivision 3 of Section 66 of the Public Service Commission Law under which the Public Service Commission has power to fix and change from time to time the standard of gas to be furnished, 'notwithstanding that other standards * * * may have been fixed by general or special statute."

[fol. 434] Fifty-first. The defendants except to Finding No. 114 herein, in which it is found that Chapter 899 of the Laws of 1923 in respect of the standard of gas was violative of the constitutional rights of the plaintiff as not affording a reasonable opportunity to make changes in its gas appliances and as not affording the plaintiff a reasonable opportunity for a court review, on the ground that the provisions of said statute in respect of the standard of gas were not and are not rigid and unalterable, for the reasons stated in exception No. Fiftieth herein.

Fifty-second. The defendants except to Finding No. 115 herein on the ground that said finding assumes that the provisions of Chapter 899 of the Laws of 1923 in respect to the standard of gas were rigid and unalterable, which as-

sumption, the defendants submit, for reasons given in exception No. Fiftieth herein, is wholly unwarranted.

Fifty-third. The defendants except to Finding No. 116 herein, on the grounds stated, and for the reasons indicated, in exception No. Fiftieth herein.

Fifty-fourth. The defendants except to Finding No. 117 herein on the grounds stated and for the reasons indicated in exception No. Fiftieth herein.

Fifty-fifth. The defendants except to Finding No. 118 herein, in which it is found that the provisions of Chapter 899 of the Laws of 1923 as to the standard, and the provisions thereof as to the rate, are not separable, and it is found that the entire statute is confiscatory, unconstitutional, discriminatory and void, upon the ground that such finding is based upon an erroneous and unwarranted construction of the statute, for reasons given in exception No. Fiftieth herein.

[fol. 435] Fifty-sixth. The defendants except to Finding No. 120 herein in which it is found that the plaintiff has no adequate remedy except by an action in equity, upon the ground that such finding is erroneous, it being neither alleged nor proved by the plaintiff that at any time since Chapter 899 of the Laws of 1923 was passed has it made an application to the Public Service Commission under subdivision 3 of Section 66 of the Public Service Commission Law for a change in the standard of gas prescribed by said Chapter 899 of the Laws of 1923, and no such application having in fact been made.

Fifty-seventh. The defendants except to the refusal of the Master to find that the fair value of the property used and useful by the plaintiff in its gas business does not exceed "the actual, reasonable investment in the property devoted to the service of the complainant's consumers" (Newton v. Consolidated Gas Co., 258 U. S. 165, 171-172).

Fifty-eighth. The defendants except to the refusal of the Master to find that the rate of return to which the plaintiff is entitled does not exceed six (6) per cent upon the fair value of the property actually used and useful by the plaintiff in its gas business, both upon the merits and

in accordance with the decisions of the United States Supreme Court hereinbefore referred to.

Fifty-ninth. The defendants except to the refusal of the Master to find that the plaintiff is not entitled to anything for "going value," both upon the merits and in accordance with the decisions of the United States Supreme Court hereinbefore referred to.

Sixtieth. The defendants except to the refusal of the [fol. 436] Master to find that the allowance of $3,500,000 for working capital is excessive, and also to the refusal of the Master to find that the plaintiff is not entitled to an allowance of $2,400,000 or any other amount for working capital for the Astoria Light, Heat and Power Company.

[fol. 437] Sixty-first. The defendants except to all those portions of the Opinion and Findings of the Special Master herein which hold in terms or in effect that reproduction cost new at present day prices is the proper basis of value in the present case, or that the value of the plaintiff's property upon which it is entitled to earn a return exceeds "the actual, reasonable investment in the property devoted to the service of the complainant's consumers" (Newton v. Consolidated Gas Co., 258 U. S. 165, 171-172); upon the ground that reproduction cost new at present day prices, or anything in excess of actual investment, is not a proper or legal basis of value in this case; that the valuation found by the Master so far as based upon figures in excess of actual investment is improper and illegal; that said valuation made by the Master has failed to take any account of existing depreciation; that said valuation is, excessive and is not a proper or legal criterion of the value of the company's property upon which it is entitled to receive a return; that said valuation does not represent the original cost of said property, nor does it represent the actual investment or prudent investment, or the actual reasonable investment made by the owners of the plaintiff company in providing the present used and useful property of the plant; and upon the further ground that a valuation of the property of the plaintiff used and useful in its gas business in excess of the undisputed investment therein is not material or necessary to the decision in this case. And the defendants

also except to all those portions of the opinion of the Special Master in which it is held in terms or in effect that the [fol. 438] plaintiff is entitled to $3,500,000 working capital for itself and $2,400,000 for Astoria Light, Heat and Power Company, on the ground that such allowances are excessive and that any allowance whatever for the Astoria Company is unwarranted. And the defendants also except to all those portions of the opinion of the Special Master in which it is held that the plaintiff is entitled to a return of eight per cent. upon the value of the property used by it, upon the grounds stated in except- No. Forty-third, supra. And the defendants also except to all those portions of the opinion of the Special Master in which it is held that the plaintiff is entitled to an allowance of $9,000,000 for "going value" upon the ground that such allowance is erroneous for reasons stated in exceptions Thirteenth and Fourteenth, supra. And the defendants also except to all other portions of the opinion of the Special Master herein which are otherwise at variance with the exceptions hereinbefore taken, or with any of such exceptions.

Charles G. Blakeslee, Solicitor for Defendants William A. Prendergast et al., 30 Church Street New York City. Harry Myron Chamberlain, Charles E. Murphy, of Counsel.

Dated New York, February 4, 1925.

[fol. 439] In United States District Court

[Title omitted]

Opinion—Filed April 22, 1925

Action in equity by the plaintiff Consolidated Gas Company of New York against the above-named public authorities of the State of New York, to obtain an adjudication as to the validity and constitutionality of Chapter 899 of the Laws of 1923, in relation to the price and quality of gas to be furnished in New York City, and to restrain the defendants from enforcing the provisions of that statute.

Motion by the plaintiff for the sustaining of exceptions

filed by the plaintiff to the report and opinion of the Special Master, the modification of the report and opinion accordingly, the confirmation of the report and opinion as so modified, and the entry of a final judgment and decree in favor of the plaintiff.

[fol. 440] Decree and findings directed in favor of the plaintiff, confirming the report and opinion as filed by the Special Master.

Appearances:

For the plaintiff: Shearman & Sterling, solicitors, by John A. Garver, William L. Ransom, Jacob H. Goetz and Sanford H. E. Freund, of counsel.

For the defendants William A. Prendergast, William R. Pooley, Charles Van Voorhis, Oliver C. Semple, and George R. Van Namee, constituting the Public Service Commission of the State of New York: Charles G. Blakeslee, solicitor, by Harry Myron Chamberlain and Charles E. Murphy, of counsel.

For the defendant Albert Ottinger, as Attorney-General of the State of New York: John Holley Clark, Jr., solicitor, by John Holley Clark, Jr., and Charles E. Buchner of counsel.

Opinion of the Court

WINSLOW, D. J.:

This is an action in equity, the object of which is to have declared unconstitutional, as confiscatory and void, Chapter 899 of the Laws of 1923, State of New York, which prescribes a maximum rate in cities of a million or more, of one dollar per thousand cubic feet of gas of not less than 650 British thermal units per cubic foot, and for an injunction restraining the defendants from enforcing or attempting to enforce the provisions of said Act. New York City is the only city of the State of over a million.

[fol. 441] The special Statutory Court in this District composed of Rogers and Hough, C. JJ., and Bondy, D. J., granted a preliminary injunction on July 6, 1923, as to this plaintiff and all other gas companies in the Southern District of New York, enjoining the enforcement of the statute under attack on condition that the gas companies continue

in effect, pendente lite, the rates theretofore fixed by the Public Service Commission and on the further condition that they continue to furnish gas of the thermal content which the Commission had authorized as the basis for such rates.

The defendants are members of the Public Service Commission of the State of New York, and the Attorney-General of the State of New York.

The matter was referred by me to Honorable James G. Graham, as Special Master, by an order dated July 24, 1923, and later amended August 7, 1923, which order directed the Special Master to hear the evidence, make all computations, find the facts and report with recommendations.

The present motion brings on for final hearing in this Court the report herein filed by the Special Master. This report, which is in full compliance with the direction of the Court in appointing the Special Master, is most exhaustive on the questions of law and fact.

The report recommends the entry of a final decree in favor of the plaintiff. The plaintiff, however, prays that certain exceptions filed by it be sustained by this Court, and that the report be modified accordingly and then confirmed as modified, and that a final decree be made in favor of the plaintiff.

[fol. 442] The defendant Attorney-General filed numerous exceptions to the findings in portions of the report, and now prays that the report be overruled, and that the constitutionality of the statute in question be sustained. The defendant Public Service Commission, while arguing in favor of the constitutionality of the statute, contends, however, that if the Court sustain the Master's findings of fact as to operating costs and original cost of the property, it is not necessary or proper for the Court to inquire further as to the value of the property for rate-making purposes, or the rate of return which the plaintiff might be entitled to in a rate case.

The Act in question became effective June 2, 1923, and provided as follows:

"67-a. Charge for Gas in Cities of One Million or More. A gas corporation engaged in the business of manufacturing, furnishing or selling illuminating gas in a city containing a population of one million or over shall not charge

or receive for gas furnished or sold in such city a sum per one thousand cubic feet in excess of one dollar, nor furnish in such city gas of a standard less than six hundred and fifty British Thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure. The Public Service Commission, notwithstanding any other provision of this chapter, shall not allow a rate or charge in the case of such cities in excess of such sum."

This statute has been under consideration by this Court in New York & Queens Gas Co. v. Prendergast, 1 Fed. (2d) 351, and 1 Fed. (2d) 371, and Bronx Gas & Electric Co., 1 Fed. (2d) 385.

[fol. 443] By Section 72 of the Public Service Commission Law, Chapter 488 of the Laws of 1910 (N. Y.), as amended by Chapter 134 of the Laws of 1921, the Legislature empowered the Commission to fix rates to be charged by a gas corporation and also to establish a period not exceeding three years, during which rate so fixed should continue in effect, and thereafter until the Commission should fix a different rate.

Subdivision 3 of Section 66 of the same law authorized the Commission to fix a standard of quality of gas to be furnished to consumers.

The Public Service Commission, pursuant to these provisions of the Public Service Commission Law, by orders adopted by it on or about August 30, 1922, effective October 1, 1922, provided for a rate applicable to the plaintiff, of $1.15 per thousand cubic feet (except as to consumers of very large quantities of gas) of a total heating value of not less than 537 British thermal units (monthly average) per cubic foot. This rate and thermal unit, it was provided by the orders, were to continue for one year from October 1, 1922. The rate was accepted by the plaintiff herein, and the various requirements of the statute complied with. Large sums of money were expended by the Gas Company in adjusting its appliances and those of its customers to conform to the thermal unit prescribed. Before the expiration of the year during which the rate so prescribed by the Public Service Commission was in effect, the statute now under attack was enacted.

In the prior cases under consideration (New York & Queens Gas Co. and Bronx Gas & Electric Co. v. Prendergast, supra), the question of rates was of secondary im- [fol. 444] portance for the reason that the facts were conclusive that the cost of production and distribution alone in those cases exceeded the rate fixed by the statute, without providing any reasonable return, upon the investment.

In pursuing his inquiry in the instant case as to whether or not the statute under consideration is confiscatory, the learned Special Master considered the case from three possible viewpoints, and upon all the evidence arrived at (1) investment cost; (2) reproduction cost, and (3) present value of the property of the plaintiff, for the year ending December 31, 1922, and similarly for the period to June 1, 1923, and to December 31, 1923. For the stated period, at past or present prices, whatever base be taken, whether investment cost, reproduction cost or present value, the return as ascertained by the Special Master for gas of the quality actually furnished is very much less than 6%. If the proposed 650 B. T. U. gas had been furnished—assuming that could have been done—the return would have been still lower. The Master's conclusion is that an actual test of the statute to demonstrate its confiscatory character is unnecessary. I believe that conclusion is amply justified by the record. There is no narrow line in this case between confiscation and non-confiscation. I concur in the Master's conclusion that the enforcement of the proposed $1 rate, if applied to actual operation of the plaintiff during the periods under consideration, would be equivalent to the confiscation of its property, whatever rate base be the starting point.

In arriving at the several bases upon which the rate of return may be computed, the Master has resolved very many questions against the plaintiff, which the Court deems should have been resolved in its favor. In determining operating expenses, items open to controversy are eliminated and operating expense is reduced to its lowest terms. [fol. 445] It would have been proper, for illustration, to include the cost of constantly recurring rate litigation in the year when incurred, instead of eliminating those expenses altogether. But in view of the Court's conclusion that the Act is unconstitutional, confiscatory and void, even with

these debatable items decided by the Master against the plaintiff, it is not necessary for this Court to pass on these specific matters.

It may not be amiss, however, to make some observations concerning this and other litigation of like character. At the outset, it must be emphasized that it is the property, and not the original cost, which the owner may not be deprived of, without due process. The present value of the property must, therefore, be the goal of investigation, and present value must be expressed in terms of present money. While reproduction cost less depreciation (if proven) is the dominant element in determining a rate base, it is not, of course, exclusive of other elements.

Monroe Gaslight & Fuel Co. v. Michigan Public Utilities Commission et al., 292 Fed., 139.

New York Tel. Co. v. Prendergast, U. S. D. C., 300 Fed. 832 (So. Dist. of N. Y.; July 25, 1924).

It is also the Court's conclusion that at the present time a reasonable rate of return, according to well recognized custom in a regulated business like this, is not less than eight per cent.

The rate of return on the property is not to be confounded with the amount of dividends that a corporation might pay on its capital stock. Indeed, according to all successful business experience, a corporation paying out in dividends all or even the major part of its net earnings is courting speedy disaster.

[fol. 446] "The return should be reasonably sufficient to assure confidence in the financial soundness of the utility and should be adequate, under efficient and economical management, to maintain and support its credit and enable it to raise money necessary for the proper discharge of its public duties."

Bluefield Water Works & Imp. Co. v. Public Service Comm. of West Va., 262 U. S., 679, 692, 693.

For the reasons stated, it is unnecessary for the Court to further analyze the elements considered in the several bases.

This Court is further of the opinion, as heretofore expressed in New York & Queens Gas Co. v. Prendergast and

Bronx Gas & Electric Co. v. Prendergast (supra), that the rate and the calorific standard prescribed by the statute under consideration are inseparable. I have expressed my views also in those cases as to the contractual obligation resulting from the rate established by the Public Service Commission for the period of one year and until thereafter modified. I see no reason in the instant case for arriving at a different conclusion. The power of the Legislature to change the rate after the expiration of the "period of repose," subject to constitutional restriction, is, of course, conceded as elementary.

The Referee's report will be confirmed. The parties may submit a proposed decree and findings in the form of a final decree in accordance with the views herein expressed. The report will be confirmed.

April 22, 1925.

Francis A. Winslow, U. S. District Judge.

[fol. 447] In United States District Court

[Title omitted]

Notice of Entering of Decree

Sirs: Please take notice that decree of which the within is a copy was duly entered herein and filed with the Clerk of the United States District Court for the Southern District of New York, on the 7th day of May, 1925.

Dated New York, May 8, 1925.

Yours, etc., Shearman & Sterling, Solicitors for Plaintiff.

Office and Post Office address: No. 55 Wall Street, Borough of Manhattan, City of New York.

To Honorable Charles G. Blakeslee, Solicitor for Defendants William A. Prendergast et al., constituting the Public Service Commission of the State of New York; [fol. 448] Honorable John Holley Clark, Jr., solicitor for defendant Albert Ottinger, as Attorney-General of the State of New York; Honorable James G. Graham, Special Master.

[fol. 449] IN UNITED STATES DISTRICT COURT

[Title omitted]

FINAL DECREE—May 7, 1925

This cause came on to be heard at the March, 1925, Term of this Court, and was argued by counsel; and thereupon, upon consideration thereof, it is

Ordered, Adjudged and Decreed:

I. The report and opinion of the Special Master, filed herein January 15, 1925, are hereby confirmed, except in the respects, and to the extent, indicated in the opinion of Winslow, D. J., filed herein April 22, 1925; and the several exceptions filed herein by the plaintiff and by the resepec-
[fol. 450] tive defendants, are hereby overruled, except to the extent, and in the respects indicated in the said opinion of Winslow, D. J.

II. Except as hereinabove modified or changed, the said findings, report and opinion of the Special Master are hereby confirmed.

III. A maximum rate of $1.00 per thousand cubic feet of gas sold by the plaintiff, in conjunction with or apart from the standard of 650 British thermal units per cubic foot, is illegal and void, because in contravention of Section 10 of Article 1, and of the Fourteenth Amendment, of the Constitution of the United States; and the provisions of Chapter 480 of the Laws of 1910 of the State of New York, known as the Public Service Commission Law, as amended and supplemented, and of Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from charging or receiving for gas manufactured and sold in the City of New York, a sum, per one thousand cubic feet, in excess of the rate of one dollar per thousand cubic feet, in conjunction with or apart from the said standard, are each likewise illegal and void.

IV. A standard of gas, required to be furnished by the plaintiff, of not less than 650 British thermal units per cubic foot, in conjunction with a rate not exceeding $1.00 per thousand cubic feet of gas, is likewise illegal and void;

and the provisions of the said Chapter 480 of the Laws of 1910, as amended and supplemented and of Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, measured under normal condi- [fol. 451] tions of temperature and atmospheric pressure, in conjunction with the rate prescribed thereby, are likewise illegal and void.

V. The provisions of Chapter 480 of the Laws of 1910, as amended and supplemented, and of Chapter 899 of the Laws of 1923, in so far as they prohibited or prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, without affording the plaintiff an opportunity and a reasonable time within which to make, or to have its consumers make, such readjustment of and changes in the gas appliances of the consumers as might be necessary in order to adapt them for the safe and efficient use of gas of such standard and to protect the consuming public against the very obvious and serious dangers to human life and property, or in so far as they denied to the plaintiff a safe and adequate judicial review of the legality thereof without incurring the penalties provided by the said statutes, are likewise illegal and void.

VI. The said Chapter 480 of the Laws of 1910, as amended and supplemented, or any other provisions of law, or any regulation prescribed thereunder, in so far as it prohibits the plaintiff from putting into effect forthwith a rate or rates for gas distributed or sold by it which will afford to it just compensation therefor, is likewise illegal and void.

VII. The plaintiff has no adequate remedy at law for the injury which will result from the enforcement of said acts, and such injury will be irreparable.

VIII. The defendants William A. Prendergast, William R. Pooley, Charles Van Voorhis, Oliver C. Semple and [fol. 452] George R. Van Namee, constituting the Public Service Commission of the State of New York, and Albert Ottinger, as Attorney-General of the State of New York, and each of them, and their, and each of their successors in office, their deputies and attorneys, and their, and each of their successors, servants and employes, and any and every

person acting or purporting to act under or by virtue of the authority of Chapter 480 of the Laws of the State of New York of 1910, as amended and supplemented, or any other or different provisions of law, be, and each of them is, hereby restrained and enjoined:

(1) From in any way enforcing or attempting to enforce against the plaintiff a rate for gas furnished by the plaintiff to its general consumers of not more than $1.00 per thousand cubic feet of gas sold, under the provisions of the said Acts or otherwise:

(2) From in any way enforcing or attempting to enforce against the plaintiff the provisions of the said Acts, in so far as they prohibit the plaintiff from charging or receiving for gas furnished in the City of New York, a sum, per one thousand cubic feet, in excess of $1.00, in conjunction with or apart from the said standard of gas;

(3) From enforcing or attempting to enforce against the plaintiff a standard of gas furnished by the plaintiff of not less than 650 British thermal units per cubic foot, or the provisions of the said Acts in so far as they prohibit the [fol. 453] plaintiff from furnishing a gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure;

(4) From bringing any action or proceeding to enforce the said penalties against the plaintiff, or by mandamus or injunction or otherwise, to compel compliance by the plaintiff with the provisions of the said Acts, or any of them, relative to the said maximum rates or charges;

(5) From doing any act or thing interfering with the right or authority of the plaintiff forthwith to furnish gas of any standard which it may lawfully furnish and to charge or receive for gas furnished by it any rate which it may lawfully charge or receive, any provisions of the said Acts or of any regulations prescribed thereunder relative to the rate to be charged and received or to the standard of gas to be furnished by the plaintiff, to the contrary notwithstanding.

IX. At any time while the injunction herein granted remains in force, any party hereto or his or its successors or assigns, may apply by notice at the foot hereof, to vacate,

modify or extend the foregoing injunction because of any change of circumstances since the entry hereof, or for any additional relief to which he or it may deem himself or itself entitled by reason of any acts or events occurring after the date of this decree.

[fol. 454] X. If, within the time hereinafter prescribed, an appeal from this decree is taken by the defendants, or any of them, then within ten days thereafter, the plaintiff shall file with the Clerk of this Court, in form and tenor first approved by this Court, its undertaking, in the sum of the excess collections hereinafter described, together with interest thereon, conditioned for the repayment to the consumers of the plaintiff, in the event that this decree is reversed on appeal and it is ultimately decided that the plaintiff is not entitled to relief in this action, of the respective sums of money received and collected by the plaintiff from such consumers in excess of the sums which would have been received if such gas had been sold and billed at the rate of One Dollar ($1.00) per thousand cubic feet, together with interest at the rate of six (6) per cent. upon any such excess so collected and repaid.

XI. Upon filing such bond and thereafter, unless and until this Court shall otherwise direct, the plaintiff shall be entitled to and may retain and use any and all moneys received and collected by it in excess of the sums which would have been received and collected at the said rate of One Dollar ($1.00) per thousand cubic feet of gas sold.

XII. If an appeal from this decree is taken by the defendants, or any of them, and the invalidity of Chapter 899 of the Laws of 1923, is sustained in so far as it prescribed a rate or rates as to the plaintiff, the said undertaking shall thereupon and thereby be cancelled or annulled, and the plaintiff shall thereupon and thereby be relieved from any and all liability thereunder, and appropriate directions ac-[fol. 455] cordingly shall be made by this Court.

XIII. The plaintiff shall be required to do the acts and things specified in Paragraph XII hereof only in case an appeal from the decree is taken by the defendants, or any of them, within thirty (30) days from the entry of this decree, and in case the defendants so appealing, and each of them, shall perfect and prosecute any such appeal and print

and file the record and all necessary papers to that end, promptly and without delay, and shall, with all convenient speed thereafter, serve a notice of application to the United States Supreme Court to advance the said appeal upon the calendar of the said Court.

XIV. The plaintiff shall recover its taxable costs and disbursements of the defendants, including the sum fixed and allowed as the compensation of the Special Master herein and his necessary disbursements, to be equally borne and paid by the defendants, in accordance with the rules of the Supreme Court of the United States on this subject.

XV. Nothing contained herein shall be construed to limit, prejudice or restrict the exercise of the jurisdiction and power of the Public Service Commission of the State of New York under Chapter 480 of the Laws of 1910 as amended and supplemented, known as the Public Service Commission Law, or any other provisions of law, not in conflict with the provisions of this decree.

New York, May 7, 1925.

Francis A. Winslow, U. S. D. J.

[fol. 456] In United States District Court

[Title omitted]

Summons on Public Service Commission to Join in Appeal—June 12, 1925

To the defendants William R. Prendergast, William R. Pooley, Charles Van Voorhis, George R. Lunn, and George R. Van Namee, constituting the Public Service Commission of the State of New York:

Please take notice that you are hereby summoned to join with me, Albert Ottinger, the Attorney-General of the State of New York, and a co-defendant in the above entitled cause on or before June 23, 1925, to prosecute an appeal in said cause from the decree and judgment of the United States District Court for the Southern District of New York, entered in the office of the clerk of said court on the

7th day of May, 1925, to the United States Supreme Court, appealing to said court to reverse the said judgment and decree of the United States District Court entered against the defendants herein upon the date mentioned.

[fol. 457] You are further notified that in case of failure on your part to join me in said appeal, the same will be regarded as an acquiescence on your part in said judgment and decree, and I shall thereupon enter an order of severance against you in the above entitled cause and shall prosecute said appeal without you.

You are further notified that on the 23d day of June, 1925, at 10 o'clock in the forenoon of that day as or as soon thereafter as counsel can be heard, I will present my petition for leave to appeal in the above entitled cause, to Hon. Francis A. Winslow, a Judge of the District Court of the United States for the Southern District of New York, at his office Room 2, in the Woolworth Building, City, County and State of New York, at which time and place you may join with me in said petition and in default of your joining, application will be made for an order of severance against you, as aforesaid.

John Holley Clarke, Jr., Solicitor for defendant Ottinger, as Attorney-General.

Office & P. O. address 49 Chambers St., New York City, N. Y.

Dated New York, June 12, 1925.

[fol. 458] Copy received June 12, 1925. Charles G. Blakeslee, Solicitor for Public Service Commission.

[fol. 459] IN UNITED STATES DISTRICT COURT

[Title omitted]

ASSIGNMENTS OF ERROR—June 17, 1925

Now comes the defendant Albert Ottinger, as Attorney-General of the State of New York, in the above entitled cause, and files the following Assignment of Errors upon which he will rely upon his prosecution of the appeal in

the above entitled cause from the decree made by this Honorable Court on the 7th day of May, 1925:

1. That said Court erred in sustaining the report of the Special Master, denying the motion of the defendant at the end of plaintiff's case to dismiss the bill of complaint and overruling the exception of the defendant to such denial.

2. That said Court erred in sustaining the report of the Special Master, denying the motion of the defendant at the end of plaintiff's whole case to dismiss the bill of complaint and overruling the exception of defendant to such denial.

[fol. 460] 3. That said Court erred in confirming the report of the Special Master in Finding marked "8" thereof. The Master found:

"As of June 1, 1923, the plaintiff owned and used two coal-gas plants, known as the 14th Street and 42d Street stations,"

on the ground that the same is not supported by the evidence, is contrary to the evidence and against the weight thereof. The Court should have found that said coal-gas plant- were not in actual use or as reserve plants by the plaintiff company for some years prior to June 1, 1923; that the land upon which these plants were located were held by the plaintiff company until such time as the real estate market made it expedient and profitable to dispose of the same.

4. That said Court erred in sustaining the report of the Special Master in so far as the Special Master found in his Finding marked "34" that Chapter 899 of the Laws of 1923 restricted the Public Service Commission from prescribing, authorizing, allowing or fixing for plaintiff or other gas companies of the State of New York—

"a rate in excess of one dollar per thousand cubic feet for gas or not less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure,"

on the ground that the same is a conclusion of law misinterpreting the Public Service Commission Law, as amended by Chapter 899 of the Laws of 1923.

5. That said Court erred in confirming the report of the Special Master in so far as said report finds in Findings marked "42," "45," "46" and "48" thereof, that the necessary and reasonable cost of the various materials and labor items going to make up the cost of the manufacture of gas were the sums therein set out. The Court should have found that the reasonable and necessary cost of these various items should not exceed the sums spent for such items at the plant of the Astoria Light, Heat and Power Company during the periods named.

[fol. 461] 6. That said Court erred in confirming the report of the Special Master as found in Finding marked "50" on the ground that said Finding is contrary to the evidence, is not supported by the evidence and is against the weight thereof; and for the further reasons hereinbefore set forth in the exception in the Assignment of Errors marked "3" above.

7. That said Court erred in confirming the report of the Special Master in so far as said report, in Findings marked "51," "53" and "57," finds the reasonable and actual cost of the manufacture of gas during the years 1922 and 1923, on the ground that the figures therein contained are for all of the plants of the plaintiff company and the Master has not based his Finding as to the reasonable and necessary cost of making gas on the actual results of the plant of the Astoria Light, Heat & Power Company which is the most efficient plant of all those in the plaintiff's system.

8. That said Court erred in confirming the Special Master's report in so far as said report, in Finding marked "55" found as follows:

"I find a reserve manufacturing plant capacity of from 20 per cent to 25 per cent of the plaintiff's actual maximum day's requirements to be reasonable and necessary for the uninterrupted supply of gas to the plaintiff's consumers,"

on the ground that this is not supported by the evidence, is contrary to the evidence and against the weight thereof. The Court should have found that the reserve actually required varies with the progress of plant construction. It may safely be reduced to 10% and need never be higher than 25%.

[fol. 462] 9. That said Court erred in confirming the Special Master's report in so far as said report, in Finding marked "58," found that the actual and reasonable cost of distribution during the year 1922 was 30.36 cents per M cubic feet, and for the year 1923 was 27.61 cents per M cubic feet, on the ground that said costs of distribution are excessive and unreasonable and not supported by the evidence, contrary to the evidence and against the weight thereof.

10. That said Court erred in confirming the Special Master's report in so far as said report, in Finding marked "59," found the necessary cost of taxes for the years 1922 and 1923 to be 9.09 cents and 10.02 cents, respectively, per M cubic feet sold, on the ground that the said figures included the taxes upon the 14th and 42d streets plants, which the Master should have found were not used and useful in plaintiff's gas business.

11. That said Court erred in confirming the report of the Special Master in so far as said report, in Finding marked "61," found, in effect, that the services performed by the officers and employees of the plaintiff company for and on behalf of the affiliated companies, were properly and adequately charged against said affiliated companies, on the ground that the said Finding is not supported by the evidence, is contrary to the evidence and against the weight thereof. The Court should have found that the charges for services performed by the plaintiff company for its affiliated [fol. 463] companies, and vice versa, are made for the purpose and intent of increasing the operating and distributing costs of the plaintiff company, over what they should reasonably be, and of placing upon the plaintiff a larger measure of the burden of the expenses of the entire system than is fair and reasonable.

12. That said Court erred in confirming the report of the Special Master in so far as it found, in Finding marked "62," in effect that the prices of material and labor will not be reduced from those paid at the time of the trial of this action, on the ground that the said Finding is contrary to the evidence and against the weight thereof, and contrary to the generally accepted opinions of economists.

13. That said Court erred in confirming the report of the Special Master in so far as said report, in Findings marked "62" and 65," found the cost of making and distributing gas for the years 1922 and 1923 and for the year 1923, the prices as of May 1, 1924, to be $.8846, and $.8294 and $.8110, respectively, on the ground that the said figures are unreasonable and excessive in the following particulars, namely: The cost of distribution is higher by at least three cents than the reasonable and necessary cost of such distribution because of improper allocation of the expenses of the System company; the cost of production is too high because it is not based upon the results obtained at the [fol. 464] plants of the Astoria Light, Heat & Power Company; the amount set out for taxes is too high because there is included in it the large taxes on the 14th Street and 42d Street plants hereinabove referred to. The Court should have found that the reasonable and necessary cost of making and distributing gas in 1924 should not have exceeded the sum of 73.65 cents.

14. That said Court erred in confirming the Master's report in so far as the said report, in Finding marked "71" thereof, found the present value of the land unimproved to be $13,374,000 on the ground that said figure is unreasonable and excessive, contrary to the evidence and against the weight thereof; and on the further ground that the Master included in said Finding the value of the lands on which was formerly situated the 14th Street and 42d Street plants of the plaintiff company, on the ground that said plants were not used and useful in the gas business of the plaintiff company on June 1, 1923, nor at any time as to which proof was taken in this case. The value found by the Master for the land formerly included in the 14th Street plant was $1,547,055; the value found by the Master for the land formerly included in the 42d Street plant was $2,135,000.

15. That said Court erred in confirming the Special Master's report in so far as said report found, in Finding "72" thereof, that certain figures purported to represent the reproduction cost of the property owned and used by the plaintiff company in its gas business as of June 1, 1923, on [fol. 465] the following grounds:

(1) That the figures therein stated as the reproduction cost of street mains $27,450,000, and services $4,350,000 are unreasonable and excessive and there is no basis for such figures in the record.

(2) That the figure of $21,323,397.90 which is found by the Master as the reproduction cost of the undistributed structural cost is unreasonable and excessive, contrary to the evidence and against the weight thereof.

(3) That as to all of the figures with the exception of the figure for land and the figure for franchises and rights and undistributed structural costs, the Master erred in finding such reproduction costs without deducting thereform an adequate amount to represent accrued depreciation.

(4) Enumerated in Assignment of Errors No. 14, as to the value of land.

16. That said Court erred in confirming the report of the Special Master in so far as the said report in Finding marked "73" thereof, purported to find the cost to reproduce certain property owned by the plaintiff and used and useful by other companies affiliated with the plaintiff, on the following grounds:

(1) That the various figures given for the cost of reproduction of said property, exclusive of the figure of $85,000 for land, and $728,925.30 for undistributed structural costs was not reduced by any amount to represent the accrued depreciation of said property.

(2) That the figure of $728,925.30 purporting to represent the reproduction cost of undistributed structural costs, is excessive and unreasonable, and contrary to the weight of evidence.

[fol. 466] 17. That said Court erred in confirming the report of the Special Master in so far as said report in Finding marked "74" thereof, found that the reasonable and necessary working capital of plaintiff in its gas business was and is at least the sum of $3,500,000, on the ground that the said Finding as to the necessary working capital is excessive and unreasonable and contrary to the evidence and against the weight thereof.

18. That said Court erred in confirming the report of the Special Master in so far as said report, in Finding marked

"75" thereof, found that "the reasonable and necessary going value of the plaintiff in its gas business as of June 1, 1923, and of the present time was and is at least the sum of $9,000,000," for the reason that there is no basis in the evidence or in the history of the plaintiff company for any Finding of value based upon the so-called going value, nor is there any evidence in the case worthy of belief which justifies the figure herein stated or any other figure of going value.

19. That said Court erred in confirming the report of the Special Master in so far as the said Special Master found, in Finding marked "76," that reproduction cost of the tangible property of the plaintiff company, plus its working capital and going value, was the sum of $122,898,715.11, on the ground that the said figure is excessive for all of the reasons stated above in the Assignment of Errors numbered "14," "15," "16," "17," and "18" above.

[fol. 467] 20. That said Court erred in confirming the report of the Special Master in so far as said report in Finding marked "77" thereof, found the reproduction cost of the tangible property of the Astoria Light, Heat & Power Company used by and useful to the plaintiff company, as of June 1, 1923, to be the sum of $31,041,333.66, on the following grounds:

(1) The figures given with the exception of the figure of $3,314,373.94 for land, $5,844,682.80 for undistributed structural costs, and $2,400,000 for working capital are excessive in that the Master failed to make any proper deduction for accrued depreciation.

(2) That the figure of $5,844,682.80 for undistributed structural costs is unreasonable and excessive and has no basis in the evidence.

(3) That the figure of $2,400,000 for working capital is unreasonable and excessive and has no basis in the evidence.

(4) That the figure of $3,314,373.94 for land is excessive and unreasonable contrary to the evidence and against the weight thereof.

21. That said Court erred in confirming the report of the Special Master in so far as the report found, in Finding

marked "78" thereof, that the reproduction cost of a portion of the property of the East River Gas Company of Long Island City used by the plaintiff as of June 1, 1923, was the sum of $8,266,253.50, on the following grounds:

(1) That the figures given in said Finding except for the item of undistributed structural cost, purporting to represent the reproduction cost of said property had not been reduced by the Master to show the proper and necessary amount of accrued depreciation.

(2) That the figure of $1,900,641.80 for undistributed structural costs is unreasonable and excessive and has no basis in the evidence.

[fol. 468] (3) That the figure of $5,086,537.80 for the Astoria tunnel is excessive and unreasonable contrary to the evidence and against the weight thereof.

22. That said Court erred in confirming the report of the Special Master in so far as said report, in Finding marked "79" thereof, found the reproduction cost of certain property owned by the Standard Gas Light Company and used by the plaintiff company, to be $353,390.19, on the following grounds:

(1) The figures therein given are excessive in that the Master has made no deduction for the reasonable and necessary accrued depreciation, except for the item of undistributed structural costs.

(2) The figure of $77,551.50 purporting to represent the undistributed structural costs of said property is unreasonable and excessive and has no basis in the evidence.

23. That said Court erred in confirming the report of the Special Master in so far as the said report found, in Finding marked "8" thereof, that the total reproduction cost *cost* of the property used by the plaintiff as of June 1, 1923, was $162,449,692.48, for the reason that the said figure is excessive for all of the reasons set out in the Assignment of Errors numbered "14," "15," "16," "17," "18," "19," "20," "21" and "22" above.

24. That said Court erred in confirming the Special Master's report in so far as the said report, in Finding marked "82" thereof, found the reproduction cost of the property

owned by the plaintiff and used and useful in its gas business, as of December 31, 1923, to be $115,324,589.75 for the reason that the said figure is excessive, on the ground stated hereinabove, and in regard to findings of reproduction cost in Finding marked "72" with the exception of the amount based upon the inclusion of the 14th Street and [fol. 469] 42nd Street plants.

25. That said Court erred in confirming the report of the Special Master in so far as the report, in Finding marked "84" thereof, found the reproduction cost of the property used by the plaintiff in its gas business as of December 31, 1923, to be $155,065,633.85, for the reason that the said figure is excessive in all of the particulars mentioned in the Assignment of Errors numbered "14," "15," "16," "17," "18," "19," "20," "21," and "22," above.

26. That said Court erred in confirming the report of the Special Master in so far as the said report, in Finding marked "85" thereof, found the original cost of the property of the plaintiff company, as of December 31, 1922, to be $57,006,798.33, for the reason that the said figure is excessive and unreasonable, because the figure given does not take into account the fact that the original cost of a large portion of the said property, which portion was taken over on six underlying companies in 1884, as appears on the plaintiff's books at a figure much higher than the actual cost to said underlying companies. On the further ground that the said figure of the original cost includes $7,781,000 for franchise which did not cost the underlying companies anything and on the further ground that the said figure includes the sum of $5,115,000, representing the original cost of the 14th Street and 42nd Street plants of plaintiff, not used or useful in plaintiff's business during the period in litigation, and further for the reason that the figure of $10,504,120.42 for real estate is excessive and unreasonable.

27. That said Court erred in confirming the report of the Special Master in so far as the said report, in Finding marked "86" thereof, found that the working capital reasonably required for the conduct of the gas business of [fol. 470] the Astoria Light, Heat & Power Company, was

at least the sum of $2,550,000, on the ground that said figure is excessive and said Finding is contrary to the evidence and there is no evidence tending to support it.

28. That said Court erred in confirming the report of the Special Master in so far as the said report, in Finding marked "88" thereof, found the original cost of the property of the plaintiff and the property of the affiliated companies used by the plaintiff, to be $98,561,127.40, on the ground that said figure is excessive, for all the reasons set out in the Assignment of Errors numbered "17," "18" and "26," above.

29. That said Court erred in confirming the report of the Special Master, in Finding marked "89" thereof, for the reason the figure found of $59,078,363.44 is excessive, for all the reasons stated in the Assignment of Error numbered "26" above.

30. That said Court erred in confirming the report of the Special Master in so far as the said report, in Finding maked "90" thereof, found that the working capital reasonably required for the conduct of the business of the Astoria, Light, Heat & Power Company was at least the sum of $3,000,000, as of June 1, 1923, on the ground that said figure is unreasonably excessive, contrary to the evidence and against the weight thereof.

[fol. 471] 31. That said Court erred in confirming the report of the Special Master in so far as said report, in Finding marked "92" thereof, found that the original cost of the tangible property of the plaintiff and of the property of the Astoria Light, Heat & Power Company, was the sum of $98,891,802.63, for the reason that the figure is excessive, on all of the grounds stated in the Assignment of Errors number "17," "18," "26," "27," "28," "29" and "30" above.

32. That said Court erred in confirming the report of the Special Master in so far as the report in Finding marked "94" thereof, found the original cost of the property owned by plaintiff and used by it in its gas business, as of December 31, 1923, to be the sum of $71,267,761.95, for the reason that said figure is excessive, on all the grounds men-

tioned in the Assignment of Errors numbered "26," "27," "28," "29" and "30" above.

33. That said Court erred in confirming the report of the Special Master in so far as the report, in Finding marked "96" thereof, found the original cost of the tangible property used by the plaintiff, including the property of the Astoria Light, Heat & Power Company and the Standard Gas Light Company, used by plaintiff, to be the sum of $98,917,970.64, for the reason said figure is excessive on the grounds mentioned in the Assignment of Errors numbered "17," "18," "26," "27," "28," "29" and "30" above.

34. That said Court erred in confirming the report of the [fol. 472] Special Master in so far as said report, in Finding marked "97" thereof, as found the present value of the tangible property of the plaintiff used and useful in its gas business as of June 1, 1923, to be $90,047,110.61, for the reason said figure is excessive, on the following grounds:

(1) Said figure includes a large amount not ascertainable but between $5,000,000 and $10,000,000 representing alleged present value of the 14th Street and 42nd Street plants which were not, on June 1, 1923, used and useful to plaintiff in its gas business.

(2) The said present value does not take into account or make proper deduction for accrued depreciation of the property of the plaintiff company.

(3) That said figure is more than the prudent investment in the properties of the plaintiff company and approximates the cost of reproduction now without depreciation, and such Finding is contrary to law.

(4) And for the further reasons hereinbefore set forth in these Assignments of Error.

35. That said Court erred in confirming the report of the Special Master in so far as said report, in Finding marked "98" thereof, found the present value of the tangible property "inclusive of working capital and going value as of June 1, 1923," to be at least the sum of $99,303,434.18, for the reason that the said figure is excessive on all the grounds

mentioned in the Assignment of Error numbered "34" above. And on the further ground the figure therein contained for working capital is unreasonable and excessive, contrary to the evidence and against the weight thereof, and that the Master erred in allowing any figure to represent "investment in going value," for the reason that there is no justification for a separate finding as to going value in [fol. 473] the sum of $9,000,000 or any other sum in this case.

36. That said Court erred in confirming report of the Special Master, in so far as said report in Finding marked "99" found the present value of the portion of the tangible property of the Astoria Light, Heat & Power Company used by and useful to plaintiff in its gas business as of June 1, 1923 "based upon the unit prices of labor and material prevailing as of that time" to be $28,426,877.06, for the reason that the said figure is excessive on the following grounds:

(1) The Master should not have made a Finding of present value based entirely upon unit prices as of June 1, 1923, but should on the contrary have found the reasonable present value to approximate the prudent investment in said property.

(2) That the Master has not made any adequate deduction in his valuation for accrued depreciation in said tangible property.

(3) And for the further reasons hereinbefore set forth in these Assignments of Error.

37. That said Court erred in confirming the report of the said Special Master in so far as said report in Finding marked "100" found that the present value of the portion of the tangible property of the East River Gas Company used by and useful to the plaintiff in its gas business as of June 1, 1923 "based upon the unit prices of labor and material prevailing as of that time and as of the time of the hearings "before said Master to be at least the sum of $6,146,427.53 for the reason that said figure is excessive and unreasonable on the following grounds:

(1) The Master should not have made a Finding of present value based entirely upon unit prices as of June 1, 1923, [fol. 474] but should on the contrary have found the reasonable present value to approximate the prudent investment in said property.

(2) That the Master has not made any adequate deduction in his valuation for accrued depreciation in said tangible property.

38. That said Court erred in confirming the report of the said Special Master in so far as in the said report in Finding marked "102" found the present value of the manufacturing plant, distributing system and other property used by the plaintiff in its gas business as of June 1, 1923, "based upon the prices of material and labor prevailing at that time and as of the time of the hearings" before said Master, including the property of the plaintiff and the property of the other companies used by the plaintiff, to be at least the sum of $134,101,738.77, for the reason that said figure is unreasonable and excessive upon all the grounds mentioned in the Assignment of Errors numbered above "34," "35," "36" and "37."

39. That said Court erred in confirming the report of the said Special Master in so far as said report in Finding marked "103" found the value of the property of the plaintiff and of the other companies as of December 31, 1923, to be at least the sum of $129,760,683.77, for the reason that the said figure is excessive on all the grounds mentioned in the Assignment of Errors numbered above "34," "35," "36," and "37," except the reasons advanced that the figures mentioned in Finding marked "97" included a large amount representing the alleged present value of the 14th and 42nd Street plants of the plaintiff company.

[fol. 475] 40. That said Court erred in confirming the report of the said Special Master in so far as said report in Findings marked "104" and "105" finds the value of the property of the plaintiff and of other companies as of June 1, 1923 to be $134,101,738.77 and as of December 31, 1923, to be the sum of $129,760,638.77, for the reason that the said figures are unreasonable and excessive upon all the

grounds mentioned and referred to in Assignment of Errors numbered above "38" and "39."

41. That said Court erred in confirming the report of the said Special Master in so far as said report in Finding marked "106" found that the plant, machinery and equipment owned by the plaintiff company and by the affiliated companies have been and are maintained in a high state of repair and in excellent operating condition, that proper repairs thereto and renewals and replacements thereof have been made, as and when required, that no diminution or less in productive capacity has been sustained and such plant, machinery, and equipment are now in as high a state of efficiency for the economical production of gas as if new; for the reason that the said Finding is contrary to the evidence, not supported by the evidence, and is against the weight thereof. The Court should have found particularly as to the 14th and 42nd Street plants that the said plants were utterly inefficient, were not in proper repair to operate, except after expensive and extended alterations and repairs and no reasonably efficient company would use plants of such an ancient design, even [fol. 476] if kept in repair in the present day and generation. The said Court should further have found that no instrumentalities of manufacture are ever as good as new except when new and that a gradual impairment of efficiency constantly takes place in all such instrumentalities of manufacture, in spite of the repairs, renewals and replacements.

42. That said Court erred in confirming the report of the said Special Master in so far as the said report in Finding marked "107" thereof found that the reasonable and proper return on the present value of the property owned and used by the plaintiff in its gas business is not less than eight (8) per cent per annum, for the reason that the said Finding is contrary to the Evidence, against the weight thereof and is contrary to law; and further that it was not for the Master to determine what rate of return the plaintiff was entitled to earn but merely to determine whether or not the statute in question was unconstitutional.

43. That said Court erred in confirming the report of the said Special Master in so far as said report in Finding marked "107" found "at no time since the enactment of Chapter 899 of the Laws of 1923 has the plaintiff earned in its gas business such return at the rate prescribed therein of $1.00 per thousand cubic feet of gas sold, either upon the amount of the present value of its property or upon the amount of the minimum investment in such property," for the reason that the said Finding is contrary to the evidence and against the weight thereof. The Court should have sustained the defendant's exception to this Finding and should have found that the plaintiff had not experimented with or made gas under the statutory requirement limiting it to a rate of $1.00 per thousand cubic feet, and that there is therefore no basis for a Finding as to the [fol. 477] net income which would be received by the plaintiff company under such a rate, and the Court should further have found that taking the cost of making and distributing gas at a reasonable and necessary figure, the plaintiff company would have earned in excess of a reasonable return upon the fair value of its property.

44. That said Court erred in confirming the report of the said Special Master in so far as said report in Findings marked "108" to "112" inclusive, *which* found the alleged returns which would have been enjoyed by the plaintiff company during the years 1922 and 1923, under the rates fixed by Chapter 899 of the Laws of 1923, for the reason that the said Findings are improper and inaccurate on all the grounds mentioned in all of the preceding assignments herein contained; and on the further grounds that the plaintiff's operations for the year 1922 are immaterial in the present case, except for comparative purposes, since the statute complained of did not go into effect until June 2, 1923.

45. That said Court erred in confirming the report of the said Special Master in so far as said report in Finding marked "113" found that under Chapter 899 of the Laws of 1923, plaintiff would not earn a reasonable compensation for the service rendered, and a reasonable return upon the fair value of the property used and useful in rendering such service, for the reason that said Finding is contrary

to the evidence and against the weight thereof, on all the grounds hereinabove mentioned in all the assignments hereinabove contained.

[fol. 478] 46. That said Court erred in confirming the report of the said Special Master in so far as said report in Finding marked "114" found that an immediate compliance with Chapter 899 of the Laws of 1923 was impossible and that compliance without a reasonable opportunity and a reasonable amount of time for readjusting or causing to be readjusted the gas appliances of its consumers would involve the most serious menace to life and property on the ground that said Finding is not supported by the evidence, is contrary to the evidence and against the weight thereof. The Court should have found that the plaintiff company under the statute should have complied with the 650 B. t. u. standard within a reasonable time and such compliance would not have involved any menace to either life or property.

47. That said Court erred in confirming the report of the said Special Master so far as said report in Finding marked "115" wherein it was found that it was commercially impossible for plaintiff to comply with the requirements of Chapter 899 of the Laws of 1923 and that ever since June 2, 1923 it has been and still is and will continue to be an absolute physical impossibility for the plaintiff, under the practical conditions obtaining in different portions of its distribution territory, to comply with this requirement and physically impossible for the plaintiff to manufacture and distribute to its consumers gas which will not, on occasions, fall below 650 British thermal units per cubic foot under such actual conditions. The Court should have interpreted the statute so as to require the plaintiff [fol. 479] company to supply gas of 650 British thermal units standard at the City Testing Stations and not at the consumers' premises. Furthermore, the Court should have found that it was not commercially impossible for the company to supply such a standard at the City Testing Stations within a reasonable time after June 2, 1923, and further that such a standard of gas, so supplied, would have resulted in a substantial benefit to the plaintiff's consumers.

48. That said Court erred in confirming the Report of the Special Master in so far as said report in Finding marked "116" thereof found as follows:

"Ever since June 2, 1923, it has been, still is, and will continue to be, impossible for the plaintiff to produce, for distribution to its consumers gas of the maximum thermal content required to comply with Chapter 899 of the Laws of 1923, without producing wide variations in the heating content of the gas supplied and without a resulting unsatis- [fol. 480] factory service. Gas of high heating content, such as that prescribed by the said statute, contains larger percentages of condensible hydro-carbons than gas of a lower heating value, such as that prescribed by the Commission's order of August 30, 1922, in Case No. 108. Even if gas of such high heating content were produced with a fair degree of uniformity at the plant, it would be unavoidably affected by changing temperature conditions in the holders and street mains, resulting in a variable and unsatisfactory service to the consumers of the plaintiff. The heat content prescribed by the said statute is exceptionally high; and gas supplied with such heat content, which had been subjected to such temperature changes beyond the control of the plaintiff, when applied to cooking utensils, incandescent lighting mantles, the interior of ranges and room heaters and all other heated surfaces, such as boiler tubes and water heater coils, would not be completely consumed, thereby causing such heated surfaces to become coated with an increasing deposit of carbon, and a large percentage of the efficiency of such gas would be lost, and serious hazards to life and property created,"

on the ground that the said Finding is contrary to the evidence, not supported by the evidence and against the weight thereof.

[fol. 481] 49. That said Court erred in confirming the report of the Special Master in so far as said report in Finding marked "117" found as follows:

"The provisions of Chapter 899 of the Laws of 1923 undertake or purport to require a standard of not less than 650 British thermal units per cubic foot to be maintained on every part of the distributing system of the

plaintiff and throughout its territory, where the gas is measured under normal conditions of the temperature and atmospheric pressure, but the said provisions nowhere define what are normal conditions of temperature and atmospheric pressure and the variety of conditions of temperature and atmospheric pressure which obtain at different times of the year and at different places on the distributing system of the plaintiff make it impossible to define or fix what are 'normal conditions of temperature and atmospheric pressure', within the meaning of the said provision,"

on the ground that the said Finding is contrary to the Law, is an improper interpretation of the statute in question, is not supported by the evidence, contrary to the evidence and against the weight thereof.

50. That said Court erred in confirming the said report of the Special Master in so far as said report in Finding marked "118" found as follows:

"The provisions of Chapter 899 of the Laws of 1923, that a gas corporation engaged in the business of manufacturing, furnishing or selling illuminating gas in a city containing a population of one million or over shall not charge or receive for gas furnished or sold in such city a sum per one thousand cubic feet in excess of One Dollar, nor furnish in such city gas of less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, are not separable. The rate fixed by Chapter 899 of the Laws of 1923 is One Dollar per thousand cubic feet for gas of the specified quality, and the requirement of a minimum thermal content is an integral part of the attempted limitation on the plaintiff's rates; and the whole provision is confiscatory, unconstitutional, discriminatory and void, for reasons hereinbefore set out,"

[fol. 482] on the ground that the said Finding is contrary to the Law, contrary to the evidence and against the weight thereof.

51. That said Court erred in confirming the said report of the Special Master in so far as said report in Finding marked "119" found as follows:

"The provisions of Chapter 899 of the Laws of 1923, in so far as it attempted to change the rate to be charged and the standard of gas to be furnished by the plaintiff in pursuance of the orders made by the Public Service Commission in its Cases Nos. 79, 79-B and its Case No. 108, on August 30, 1922, operated to impair the obligation of a contract between the State of New York, acting by its duly delegated agent, to wit, the Public Service Commission, and the plaintiff, in contravention of the plaintiff's constitutional guaranties, and particularly of Section 10 of Article 1 of the Constitution of the United States,"

on the ground that the said Finding is contrary to the Law and to the evidence.

52. That said Court erred in confirming the said report of the Special Master in so far as said report in Finding marked "120" found that plaintiff has no adequate remedy except by an action in equity, on the ground that the said Finding is contrary to the Law, is against the weight of the evidence and has no support in the evidence.

53. That said Court erred in confirming the report of the Special Master in so far as said report made eight separate and distinct recommendations favorable to the claims of the plaintiff in this action, said recommendation appearing at the close of the said report; on the ground that all of the recommendations are contrary to the Law and against the weight of the evidence, for the reasons stated in the Assignment of Errors hereinabove set forth.

54. That said Court erred in confirming the report of the [fol. 483] Special Master in so far as said report included in it and made a part of it the so-called opinion of the Special Master printed with the said report on all the respective grounds hereinabove set forth in the various preceding Assignments of Error, as to the different Findings which are incorporated in effect both in the said opinion and in the said report.

55. That said Court erred in stating in its opinion as follows:

"For the stated periods (for the year ending December 31, 1922, the period of June 1, 1923, and to December 31,

1923) at past or present prices, whatever base be taken, whether investment cost, reproduction cost or present value, the return as ascertained by the Special Master for gas of the quality actually furnished is very much less than 6%,"

on the ground that the said statement is not supported by the evidence, is contrary to the evidence and against the weight thereof; and on the further ground that the Findings of the Master as to investment cost, reproduction cost and present value is excessive and unreasonable on all the grounds hereinbefore stated and on the further ground that the return, as calculated by the Master, is very much less than should have been found, because the said Master failed to base his Findings on the cost of making gas at a reasonably efficient plant and for all the other reasons and on all the other grounds hereinbefore set forth in the various Assignments of Error directed to the Court's confirmation of the Master's Findings as to the cost of making and distributing gas.

[fol. 484] 56. That said Court erred in stating in its opinion "If the proposed 650 B. t. u. gas had been furnished,—assuming that could have been done—the return would have been still lower," on the ground that the said statement in so far as it indicates that if 650 B. t. u. gas had been furnished, return on the fair value of the plaintiff's property would have been less than 6%, is contrary to the evidence and against the weight thereof; and for all the reasons hereinabove set forth in the various preceding Assignments of Error.

57. That said Court erred in stating in its opinion as follows:

"The Master's conclusion is that an actual test of the statute to demonstrate its confiscatory character is unnecessary. I believe that conclusion is amply justified by the record. There is no narrow line in this case between confiscation and non-confiscation. I concur in the Master's conclusion that the enforcement of the proposed $1.00 rate, if applied to actual operation of the plaintiff during the periods under consideration, would be equivalent to the confiscation of its property, whatever rate base be the starting point,"

for the reason that the said statement is contrary to the Law and against the weight of the evidence thereof, for all the reasons hereinabove set forth in the preceding Assignments of Error.

58. That said Court erred in adjudging in its opinion as follows:

"In arriving at the several bases upon which the rate of return may be computed, the Master has resolved very many questions against the plaintiff, which the Court deems should have been resolved in its favor. In determining operating expenses, items open to controversy are eliminated and operating expense is reduced to its lowest terms. [fol. 485] It would have been proper, for illustration, to include the cost of constantly recurring rate litigation in the year when incurred, instead of eliminating those expenses altogether. But in view of the Court's conclusion that the Act is unconstitutional, confiscatory and void, even with those debatable items decided by the Master against the plaintiff, it is not necessary for this Court to pass on these specific matters,"

on the ground that the said Finding is contrary to the Law and against the weight of the evidence. The Court should have found that the Master, in effect, resolved most of the doubts in the case in favor of the plaintiff.

59. That said Court erred in adjudging in its opinion that "reproduction cost less depreciation (if proven) is the dominant element in determining a rate base", for the reason that the said statement is contrary to the Law and to the decisions of the Supreme Court in rate cases.

60. That said Court erred in adjudging in its opinion as follows:

"It is also the Court's conclusion that at the present time a reasonable rate of return, according to well recognized custom in a regulated business like this, is not less than 8%,"

on the ground that the said Finding is contrary to the Law, contrary to the evidence and contrary to the various decisions of the Supreme Court concerning the proper rate of return to be allowed to a substantial monopoly operating

in the most favorable territory in the world. The Court should have found that the statute would not be confiscatory if it allowed a return as high as 5½% upon the fair value of the property.

[fol. 486] 61. That said Court erred in finding in its opinion "that the rate and the calorific standard prescribed by the statute under consideration are inseparable" for the reason that said Finding is contrary to the Law, contrary to the evidence and is an improper interpretation of the statute.

62. That said Court erred in finding in its opinion as follows:

"This Court is further of the opinion, as heretofore expressed in N. Y. & Queens Gas Co. v. Prendergast and Bronx Gas & Elec. Co. (supra), that the rate and the calorific standard prescribed by the statute under consideration are inseparable. I have expressed my views also in those cases as to the contractual obligation resulting from the rate established by the Public Service Commission for the period of one year and until thereafter modified. I see no reason in the instant case for arriving at a different conclusion,"

on the ground that the said Finding and decision is contrary to the Law and to the evidence.

63. That said Court erred in adjudging in the Decree, entered herein on May 7, 1925, as follows:

"1. The report and opinion of the Special Master, filed herein January 15, 1925, are hereby confirmed, except in the respects, and to the extent, indicated in the opinion of Winslow, D. J., filed herein April 22, 1925; and the several exceptions filed herein by the plaintiff and by the respective defendants, are hereby overruled, except to the extent, and in the respects indicated in the said opinion of Winslow, D. J.,"

on the ground that the said Judgment in the Decree is contrary to the Law, is indefinite and uncertain in so far as it attempts in certain unnamed parts to modify the report and the opinion of the Master hereinabove referred to. The said Finding is contrary to the evidence and the weight

thereof, in so far as it confirms the report of the said [fol. 487] Special Master on all the grounds hereinabove set forth in the preceding Assignments of Error.

64. That said Court erred in adjudging in its Decree as follows:

"II. Except as hereinabove modified or changed, the said findings, report and opinion of the Special Master are hereby confirmed,"

on the ground that the said Judgment is contrary to the Law and to the evidence and the weight thereof and for all the reasons set forth in all the preceding Assignments of Error herein.

65. That said Court erred in adjudging in its Decree as follows:

"III. A maximum rate of $1.00 per thousand cubic feet of gas sold by the plaintiff, in conjunction with or apart from the standard of 650 British thermal units per cubic foot, is illegal and void, because in contravention of Section 10 of Article 1, and of the Fourteenth Amendment of the Constitution of the United States; and the provisions of Chapter 480 of the Laws of 1910 of the State of New York, known as the Public Service Commission Law, as amended and supplemented, and of Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from charging or receiving for gas manufactured and sold in the City of New York, a sum, per one thousand cubic feet, in excess of the rate of one dollar per thousand cubic feet, in conjunction with or apart from the said standard, are each likewise illegal and void,"

on the ground that the said Judgment is contrary to the Law, against the weight of the evidence, contrary to the evidence and has no evidence to support it, on all the grounds hereinabove mentioned in the preceding Assignments of Error.

66. That said Court erred in adjudging in its Decree as follows:

[fol. 488] "IV. A standard of gas, required to be furnished by the plaintiff, of not less than 650 British thermal units per cubic foot, in conjunction with a rate not exceed-

ing $1.00 per thousand cubic feet of gas, is likewise illegal and void; and the provisions of said Chapter 480 of the Laws of 1910, as amended and supplemented and of Chapter 899 of the Laws of 1923, in so far as they prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, measured under normal conditions of temperature and atmospheric pressure, in conjunction with the rate prescribed thereby, are likewise illegal and void,"

for the reason that the said Judgment is contrary to the Law and contrary to the evidence, for all the reasons hereinabove set forth in all the preceding Assignments of Error referring to the subject matter in said Judgment.

67. That said Court erred in adjudging in its Decree as follows:

"V. The provisions of Chapter 480 of the Laws of 1910, as amended and supplemented, and of Chapter 899 of the Laws of 1923 in so far as they prohibited or prohibit the plaintiff from furnishing gas of a standard less than 650 British thermal units per cubic foot, without affording the plaintiff an opportunity and a reasonable time within which to make, or to have its consumers make, such readjustment of and changes in the gas appliances of the consumers as might be necessary in order to adapt them for the safe and efficient use of gas of such standard and to protect the consuming public against the very obvious and serious dangers to human life and property, or in so far as they denied to the plaintiff a safe and adequate judicial review of the legality thereof without incurring the penalties provided by the said statutes, are likewise illegal and void,"

on the ground that the said Judgment is contrary to the Law, against the evidence and the weight thereof, for all the reasons hereabove set forth in the preceding Assignments of Error.

[fol. 489] 68. That said Court erred in said Decree in adjudging as follows:

"VI. The said Chapter 480 of the Laws of 1910, as amended and supplemented,, or any other provisions of

law, or any regulation prescribed thereunder, in so far as it prohibits the plaintiff from putting into effect forthwith a rate or rates for gas distributed or sold by it which will afford to it just compensation therefor, is likewise illegal and void,"

on the ground that the said Judgment is contrary to the Law, against the evidence and the weight thereof; proceeds far beyond the necessities of the case in making a Judgment in regard to laws and regulations not before the Court.

69. That said Court erred in adjudging in said Decree that the plaintiff has no adequate remedy at Law for the injury which will result from the enforcement of said acts and such injury will be irreparable, on the ground that the said Judgment is contrary to the Law and contrary to the evidence.

70. That said Court erred in restraining the defendants from enforcing or attempting to enforce the statute here in controversy, as against the plaintiff company, on the ground that the Decrees so enjoining the defendants is contrary to the Law, against the evidence, and the weight thereof, and is not supported by the evidence; for all the reasons hereinbefore set forth in the preceding Assignments of Error.

71. That said Court erred in Decreeing in its said decree that the plaintiff would cover its taxable costs and disbursements of the defendants, including the sum fixed and [fol. 490 & 491] allowed as the compensation of the Special Master herein, on the ground that the said Judgment is contrary to the Law, the weight of the evidence, for all the reasons hereinabove set forth in the preceding Assignments of Error.

Albert Ottinger, Attorney-General of the State of New York. John Holley Clark, Jr., Solicitor for Defendant Ottinger, 51 Chambers Street, New York City. John Holley Clark, Jr., Charles E. Buchner, of Counsel.

Dated June 17, 1925.

[fol. 492] IN UNITED STATES DISTRICT COURT

[Title omitted]

PETITION FOR APPEAL—June 12, 1925

The petition of Albert Ottinger, as Attorney-General of the State of New York, respectfully shows to this court:

(1) That Albert Ottinger is the Attorney-General of the State of New York and one of the defendants in this action.

(2) That this is a suit in equity to have declared unconstitutional chapter 899 of the laws of 1923 of the State of New York, on the ground that the rate and quality for gas fixed therein are confiscatory and unconstitutional.

(3) The issues herein were referred to a Special Master and tried before said Special Master. The trial began on or about the 3rd day of March, 1924, and continued to on or about the 29th day of December, 1924. The testimony before said Special Master consisted of approximately 10,515 typewritten pages and 1,150 exhibits.

[fol. 493] (4) The Special Master's report was filed in the office of the clerk of the District Court on or about the 15th day of January, 1925. The defendant, Albert Ottinger, duly filed exceptions to the Special Master's report in the office of the clerk of the United States District Court.

(5) Thereafter the exceptions to the Special Master's report duly came on to be heard before the District Court of the United States (Judge Francis A. Winslow, sitting.) The opinion and decree of the District Court were filed in the office of the clerk of the United States District Court for the Southern District of New York on the 7th day of May 1925.

(6) That in substance the decree restrains the defendants from enforcing in any way chapter 899 of the laws of 1923 of the State of New York, and declares that said statute violates or is in contravention of section 10 of article 1 and of the Fourteenth Amendment of the Constitution of the United States.

(7) The above named defendant, Albert Ottinger, as Attorney-General of the State of New York, feeling aggrieved by the aforesaid decree entered on the 7th day of May, 1925, does hereby appeal from said decree *of* the Supreme Court of the United States for the reasons set forth in the Assignment of Errors herewith filed and prays that his appeal will be allowed and citation issue as provided by law, and that a transcript of the record of proceedings and documents, upon which said decree was based duly authenticated, be sent to the United States Supreme [fols. 494 & 495] Court at Washington, District of Columbia, under the rules and regulations of such court as made and provided, and your petitioner prays that an order be made dispensing with security.

Albert Ottinger, Attorney-General of the State of New York. John Holley Clark, Jr., Solicitor for Albert Ottinger, as Attorney-General of the State of New York.

Office and P. O. address: 49 Chambers Street, Borough of Manhattan, City of New York, N. Y.

Dated New York, June 12, 1925.

Duly sworn to by Albert Ottinger. Jurat omitted in printing.

[fols. 496 & 497] Citation, in usual form, omitted in printing.

[fol. 498] In United States District Court

[Title omitted]

Order Allowing Appeal—June 23, 1925

The defendant, Albert Ottinger, as Attorney-General of the State of New York, conceiving himself aggrieved by the decree dated the 7th day of May, 1925, in the above entitled cause does hereby appeal from said final decree, to the Supreme Court of the United States for the reasons set forth in the Assignment of Errors filed herewith, and prays

that his appeal be allowed and that citation issue as prescribed by law, and that a transcript of the record of proceedings and documents upon which said decrees were based duly authenticated, be sent to the United States Supreme Court, Washington, District of Columbia, under the rules of said court in such cases made and provided, on or before the 23 day of July, 1925, unless the time is further extended; and your petitioner further prays that the bond to cover the costs of the appeal be dispensed with.

Dated New York, June 17, 1925.

Albert Ottinger, Attorney-General of the State of New York. John Holley Clark, Jr., Solicitor for Defendant Ottinger.

Office & P. O. address: 49 Chambers Street, New York City, New York.

[fol. 499 & 500] Appeal allowed. Return of record on appeal to be filed on or before the 23 day of July, 1925, unless time further extended. Defendants William A. Prendergast, William R. Pooley, Charles Van Voorhis, George R. Lunn and George R. Van Namee, constituting the Public Service Commission of the State of New York, are hereby severed as parties-defendant.

Francis A. Winslow, District Judge, U. S. District Court, Southern Dis. of New York.

Dated New York, June 23, 1925.

[fol. 501] In United States District Court

[Title omitted]

Statement of Evidence

Preliminary sessions were held on February 5 and 25, 1924, before the special master.

James G. Graham, Special Master.

Appearances of counsel omitted in printing.

[fol. 502] New York, March 3, 1924.

Met pursuant to adjournment.

MINUTE ENTRIES OF MOTIONS

Motion made by Mr. Ransom for judgment in favor of the plaintiff upon the complaint and the answers.

Decision reserved for the District Court.

Motion by Mr. Donnelly to dismiss the bill of complaint upon the following grounds:

First. That the bill of complaint fails to state facts sufficient to constitute a cause of action.

Second. For the failure of the plaintiff to show a ground for relief in equity or at the common law.

Decision also reserved for the District Court.

[fol. 503] OFFERS IN EVIDENCE

Mr. Ransom, in behalf of the plaintiff, offered various documents, embracing articles of incorporation of the Consolidated Gas Company of New York, of The Astoria Light, Heat and Power Company, and of predecessor corporations; franchises granted to those corporations; deeds and other records evidencing the plaintiff's and The Astoria Company's ownership and title to various lands, properties, franchises, and rights; corporate records relating to the capitalization of the plaintiff and of The Astoria Light, Heat and Power Company; orders made by the Public Service Commission of the State of New York authorizing the issuance by the plaintiff and by The Astoria Light, Heat and Power Company of various securities; the filed and published tariff schedules of the plaintiff; orders and resolutions adopted by the Public Service Commission of the State of New York relating to the rates and standard of service of gas corporations; and various laws of the State of New York relating to the matters involved in this action, which were received in evidence and marked, respectively, Plaintiff's Exhibits Nos. 1 to 255, both inclusive, including the following:

Judgment made in the Supreme Court for New York County, at the Trial Term, March 16, by Honorable Edward J. Gavegan, Justice, in the action of the Consolidated Gas Company of New York against the City of New York, on June 12, 1917 (Received in evidence and considered marked Plaintiff's Ex. No. 14).

[fol. 504] Consolidation Agreement, dated September 29, 1884, between the New York Gaslight Company, the Manhattan Gaslight Company, the Metropolitan Gaslight Company of the City of New York, the New York Mutual Gaslight Company, the Municipal Gaslight Company of New York, the Knickerbocker Gaslight Company, and the Harlem Gaslight Company, for the consolidation of the companies into the Consolidated Gas Company of New York, filed and recorded in the office of the New York County Clerk on November 10, 1884, and in the office of the Secretary of State on November 10, 1884 (Received in evidence and considered marked Plaintiff's Ex. No. 44).

Certificate of Reorganization of the New York Gaslight Company, dated May 1, 1871, pursuant to Chapter 480 of the Laws of 1867, amending Chapter 38 of the Laws of 1848, authorizing the formation of gaslight companies, filed in the Secretary of State's office on June 1, 1871, and in the New York County Clerk's office on June 1, 1871 (Received in evidence and considered marked Plaintiff's Ex. No. 45).

Extract from Minutes of the Special Meeting of Stockholders of the Consolidated Gas Company of New York, held March 9, 1900, setting forth resolution authorizing an increase of the capital stock of the company from $39,078,000 to $54,595,200 par value, and the use of the increase of capital stock ($15,517,200 par value) to redeem 4% debentures issued for the stock of the New York Gas and Electric Light, Heat and Power Company (aggregating $36,000,000 par value) (Received in evidence and considered marked Plaintiff's Ex. No. 168).

Certificate of Increase of Capital Stock of the Consolidated Gas Company of New York from $39,078,000 to $54,595,200 par value, dated March 9, 1900; filed in the Secretary of State's office March 12, 1900, and in the New York County Clerk's office, March 13, 1900 (Received in evidence and considered marked Plaintiff's Ex. No. 169).

Extract from Minutes of a Special Meeting of the Stock-

holders of the Consolidated Gas Company of New York, held July 16, 1900, setting forth resolution authorizing an increase of the capital stock of the company from $54,592,-200 par value to $80,000,000 par value for various general purposes (Received in evidence and considered marked Plaintiff's Ex. No. 170).

[fol. 505] Certificate of Increase of Capital Stock of Consolidated Gas Company from $54,595,200 par value to $80,-000,000 par value, dated July 16, 1900; filed in the Secretary of State's office July 18, 1900; and in the New York County Clerk's office July 19, 1900 (Received in evidence and considered marked Plaintiff's Ex. No. 171).

Extract from Minutes of a Special Meeting of the Stockholders of the Consolidated Gas Company of New York, held June 2, 1904, setting forth a resolution authorizing an increase of the capital stock of the company from $80,000,-000 par value to $100,000,000 par value, and $20,000,000 par value of coupon debentures convertible into the stock authorized as an increase, the proceeds to be used for various general purposes (Received in evidence and considered marked Plaintiff's Ex. No. 172).

Certificate of Increase of the Capital Stock of the Consolidated Gas Company of New York from $80,000,000 par value to $100,000,000 par value, dated June 2, 1904; filed in the Secretary of State's office June 6, 1904, and in the New York County Clerk's office June 7, 1904 (Received in evidence and considered marked Plaintiff's Ex. No. 173).

Certificate of Increase of Capital Stock of the Consolidated Gas Company, dated May 25, 1914, from $100,000,000 par value to $125,000,000 par value, filed in the Secretary of State's office and in the office of the Clerk of the County of New York on May 28, 1914 (Received in evidence and considered marked Plaintiff's Ex. No. 174).

Order made by Public Service Commission for the First District, December 1, 1914, in Case 1823, authorizing the Consolidated Gas Company of New York to issue $25,000,-000 debentures and $25,000,000 capital stock (Received in evidence and considered marked Plaintiff's Ex. No. 175).

Order of the Public Service Commission for the First District made March 13, 1921, in Case No. 2459, authorizing issue of $15,000,000 ten-year seven per cent. debentures (Received in evidence and considered marked Plaintiff's Ex. No. 176).

[fol. 506] Order of the Public Service Commission, made December 7, 1922, in Case No. 992, authorizing the issue of $15,000,000 aggregate par value of Six Per Cent. Cumulative Participating Preferred stock, and cancelling authorization of March 13, 1921, in Case No. 2459, authorizing issue of $15,000,000 ten-year seven per cent. debentures (Received in evidence and considered marked Plaintiff's Ex. No. 177).

Certificate of Increase and Classification of Capital Stock of the Consolidated Gas Company of New York, dated December 4, 1922, from $125,000,000 par value to $140,000,000 par value, to be divided into 1,250,000 shares of common stock of the par value of $100 each and 300,000 shares of Six per cent. Cumulative Participating Preferred Capital Stock of the par value of $50 each. Filed in the office of the Secretary of State December 5, 1922, filed in the office of the New York County Clerk December 6, 1922 (Received in evidence and considered marked Plaintiff's Ex. No. 178).

Order of the Public Service Commission made December 7, 1922, in Case No. 991, authorizing the Consolidated Gas Company of New York to issue 500,000 shares of common capital stock without nominal or par value, to realize net proceeds of $25,000,000 (Received in evidence and considered marked Plaintiff's Ex. No. 179).

Order of the Public Service Commission made December 8, 1922, in Case No. 1004, authorizing the issue by the Consolidated Gas Company of New York of 2,500,000 shares of common capital stock without par value in exchange for 1,250,000 shares of outstanding common capital stock of the value of $100 per share (Received in evidence and considered marked Plaintiff's Ex. No. 180).

Certificate of Amendment by Consolidated Gas Company of New York pursuant to Section 24 of the Stock Corporation Law, dated December 9, 1922; filed in the office of the Secretary of State December 13, 1922, and in the office of the New York County Clerk, December 14, 1922 (Received in evidence and considered marked Plaintiff's Ex. No. 181).

Order of the Public Service Commission made December 6, 1923, in Case No. 1682, authorizing the Consolidated Gas Company of New York to issue 600,000 shares of common capital stock without nominal or par value to realize net pro-

ceeds of $30,000,000 (Received in evidence and considered marked Plaintiff's Ex. No. 182).

[fol. 507] Order made by Public Service Commission, August 17, 1922, in Case No. 680, consenting to the transfer by the New York Mutual Gas Light Company of its works and system, as set forth in its petition verified May 16, 1922, to the Consolidated Gas Company of New York, as of February 28, 1922 (Received in evidence and considered marked Plaintiff's Ex. No. 198).

Petition dated May 16, 1922, by the New York Mutual Gas Light Company to the Public Service Commission, for consent to the transfer of the works and property of the New York Mutual Gas Light Company to the Consolidated Gas Company of New York (Received in evidence and considered marked Plaintiff's Ex. No. 199).

Notification, executed August 23, 1922, by the Consolidated Gas Company and the New York Mutual Gas Light Company, filed with the Public Service Commission, in compliance with the Order in Case No. 680, dated August 17, 1922, accepting the Order of the Commission with all its terms and conditions (Received in evidence and considered marked Plaintiff's Ex. No. 200).

Report, dated October 28, 1922, by the Consolidated Gas Company of New York and the New York Mutual Gas Light Company, pursuant to Paragraph 3 of the Order made by the Commission in Case No. 680, on August 17, 1922, setting forth certain data as to the consummation of the transfer (Received in evidence and considered marked Plaintiff's Ex. No. 201).

Deed from the New York Mutual Gas Light Company to the Consolidated Gas Company of New York, dated August 31, 1922; the land affected by the said instrument being the 11th Street Mutual Works and lying in Section 2 in Blocks 368, 369, and 382 on the land Map of the County of New York, recorded in the office of the register of the County of New York, on October 2, 1922, in Liber 3300, page 339 of Conveyances, Block- Nos. 368, 369, and 382 (Received in evidence an deonsidered marked Plaintiff's Ex. No. 202).

Schedules of gas rates of the Consolidated Gas Company of New York, issued, posted, and filed October 5, 1918, and effective November 4, 1918, in pursuance of order of the

Public Service Commission for the First District in Case No. 2330, dated September 17, 1918, identified as Con. G. Co. No. 1, containing Sixth revised sheet No. 3 (cancelling Fifth revised sheet No. 3, effective March 1, 1921) date of issue June 30, 1921, date effective August 1, 1921, and establishing rate of $1.25 per thousand cubic feet of gas (Received in evidence and considered marked Plaintiff's Ex. No. 203).

[fol. 508] Order made by the Public Service Commission, May 20, 1921, in Case No. 79, directing a hearing in the matter of gas rates in the City of New York and suburban territory (Received in evidence and considered marked Plaintiff's Ex. No. 204).

Order made by the Public Service Commission, June 8, 1921, in Case No. 79, directing the filing of various data, including copies of oil and coal contracts (Received in evidence and considered marked Plaintiff's Ex. No. 205).

Order made by the Public Service Commission, February 1, 1922, in Case No. 79, Matter of gas rates in the City of New York and suburban territory, and in case No. 79-G, Matter of gas rates for Gas of Consolidated Gas Company of New York, directing a hearing (Received in evidence and considered marked Plaintiff's Ex. No. 206).

Order made by Public Service Commission, June 8, 1921, in Case No. 108, in the "Matter of standards of purity, illuminating power, and heating power of gas, and standards for the measurement thereof in the City of New York and suburban territory," directing a hearing as to gas standards, etc. (Received in evidence and considered marked Plaintiff's Ex. No. 207).

Order made by the Public Service Commission, August 30, 1922, in Case No. 108, prescribing a 537 minimum average B. t. u. standard for gas in New York City and suburban territory (Received in evidence and considered marked Plaintiff's Ex. No. 208.)

Order made by Public Service Commission, August 30, 1922, in Case No. 79, In the Matter of gas rates in the City of New York and surburban territory, Case No. 79-G, Matter of rates for gas of the Consolidated Gas Company of New York and allied company cases, prescribing as the just and reasonable rates to be charged by the Consolidated Gas Company, et al., to general consumers, $1.15 per thousand

cubic feet of gas with graduated reductions according to quantity consumption (Received in evidence and considered marked Plaintiff's Ex. No. 209).

Opinion adopted by the Public Service Commission, August 30, 1922, in Case No. 79, Matter of gas rates in the City of New York and suburban territory, and allied company cases, and in Case No. 108, Matter of standards, etc. (Received in evidence and considered marked Plaintiff's Ex. No. 210).

[fol. 509] Report by the Public Service Commission, dated August 30, 1922, in the Matter of gas rates in the City of New York and suburban territory, Case No. 79. (Received in evidence and considered marked Plaintiff's Ex. No. 211.)

Report by the Public Service Commission, dated August 30, 1922, In the Matter of standards of purity, illuminating power and heating power for gas, and standards for the measurement thereof, in the City of New York and suburban territory, Case No. 108 (Received in evidence and considered marked Plaintiff's Ex. No. 212).

Communication dated September 1, 1922, from Francis E. Roberts, Secretary Public Service Commission, to Consolidated Gas Company of New York, transmitting and serving upon Consolidated Gas Company of New York a certified copy of the Order of the Commission dated August 30, 1922, in Case No. 108, In the Matter of gas standards, etc. (Received in evidence and considered marked Plaintiff's Ex. No. 213).

Notification dated September 12, 1922, from the Consolidated Gas Company to the Public Service Commission, accepting the Order of August 30, 1922, in Case No. 108, In the Matter of gas standards, etc. (Received in evidence and considered marked Plaintiff's Ex. No. 214).

Communication dated September 1, 1922, from Francis E. Roberts, Secretary, Public Service Commission, to Consolidated Gas Company of New York, transmitting and serving certified copy of the Order of August 30, 1922, in Case No. 79, as to rates (Received in evidence and considered marked Plaintiff's Ex. No. 215).

Notification dated September 13, 1922, by the Consolidated Gas Company of New York accepting the Commission's Order of August 30, 1922, in Case No. 79, relative

to gas rates (Received in evidence and considered marked Plaintiff's Ex. No. 216).

Special Permission Order No. G65 of Public Service Commission, dated September 27, 1922, authorizing the filing by the Consolidated Gas Company of New York of new tariff schedule for gas service upon short notice (Received in evidence and considered marked Plaintiff's Ex. No. 217).

[fol. 510] Tariff Schedule identified as P. S. C. No. 1-Gas (Superseding Con. G. Co. No. 1) issued, filed, and posted September 30, 1922, effective October 1, 1922, for gas service in the Borough of Manhattan and The Bronx, City of New York (Received in evidence and considered marked Plaintiff's Ex. No. 218).

Order made by Public Service Commission, June 4, 1923, in Case No. 1360, "In the Matter of rates to be charged for gas in the City of New York," directing compliance with the provisions of Chapter 899 of the Laws of 1923, in relation to charges for gas in cities of over one million inhabitants (Received in evidence and considered marked Plaintiff's Ex. No. 219).

Order made by Public Service Commission for the First District, May 4, 1914, in Case No. 1717, authorizing The Astoria Light, Heat & Power Company to issue $5,000,000 of 5½% bonds and $9,500,000 par value of capital stock (Received in evidence and considered marked Plaintiff's Ex. No. 246).

Certificate of Increase of Capital Stock of The Astoria Light, Heat & Power Company, July 25, 1922, and filed in the Secretary of State's office, July 28, 1922. The increase was from $10,000,000 to $17,500,000 (Received in evidence and considered marked Plaintiff's Ex. No. 247).

Certificate of Increase of Capital Stock of The Astoria Light, Heat & Power Company, December 22, 1922; original filed in the Secretary of State's Office, December 26, 1922, the said increase being from $17,500,000 to $22,500,000 (Received in evidence and considered marked Plaintiff's Ex. No. 248).

Order, in Case No. 1026, made December 21, 1922, by Public Service Commission, authorizing issuance of $5000,000 capital stock of The Astoria Light, Heat & Power Company, in place of First Mortgage bonds for similar amount

(Received in evidence and considered marked Plaintiff's Ex. No. 249).

Order in Case No. 813, made November 23, 1922, by Public Service Commission, authorizing issuance of $7,500,000 capital stock by The Astoria Light, Heat & Power Company (Received in evidence and considered marked Plaintiff's Ex. No. 250).

[fol. 511] Certificate amending Certificate of Incorporation of The Astoria Light, Heat & Power Company, under Section 24 of the Stock Corporation Law so as to provide for the conversion of par value stock into non-par value stock, dated December 28, 1922, and filed in the office of the Secretary of State, January 24, 1924, and in the Queens County Clerk's office, (Received in evidence and considered marked Plaintiff's Ex. No. 251).

Uniform System of Accounts for Gas Corporations as published by the Public Service Commission for the First District, in 1908, and as in effect to January 1, 1924 (Received in evidence and considered marked Plaintiff's Ex. No. 252).

Uniform System of Accounts for Gas Corporations prescribed by the Public Service Commission of the State of New York, December 19, 1923, by Order in Case No. 746 (Received in evidence and considered marked Plaintiff's Ex. No. 253).

Order of the Public Service Commission dated September 21, 1922, fixing standards of purity, illuminating power and heating power of gas in Case No. 881, applicable to the Sea Cliff and Glen Cove Gas Company (Received in evidence and considered marked Plaintiff's Ex. No. 254).

STIPULATION

It was stipulated by counsel for the respective parties that, in order to save time, it is admitted for the purposes of this case that at various dates subsequent to August 30, 1922, to and including December, 1922, the Public Service Commission made orders in the identical form, so far as concerns the B. t. u. standard, relative to the supply of manufactured gas all over the State of New York, outside of the City of New York, as it did in the order of September

21, 1922, in Case No. 881, applicable to the Sea Cliff and Glen Cove Gas Company, received in evidence as Exhibit No. 254.

Petition, filed November 17, 1923, upon which was based the order made by the Public Service Commission on December 6, 1923, in Case No. 1682 (Received in evidence and considered marked Plaintiff's Ex. No. 255).

Memorandum of the accounting division of the Public Service Commission in Case No. 1682, dated December 5, 1923, referred to in the order of the Commission which was received as Plaintiff's Ex. No. 182, was offered in behalf of the plaintiff and was marked Plaintiff's Exhibit No. 256-A for identification.

[fol. 512] Report of the Engineering Division of the Public Service Commission, dated December 6, 1923, in the same matter, was offered in behalf of the Plaintiff and marked Plaintiff's Exhibit No. 257 for Identification.

[fol. 513] New York, March 4, 1924.

Met pursuant to adjournment.

HERBERT W. ALRICH, called as a witness on behalf of the plaintiff, being duly sworn, testified as follows:

Direct examination by Mr. Ransom:

I reside at 660 West 180th Street, Manhattan. I am a civil and gas engineer and have a certificate as a licensed Professional Engineer from the Regents of the University of the State of New York.

I was appointed by the Board of Trustees of the Consolidated Gas Company, first in 1913, and have been re-elected by them annually. My title now is Assistant Engineer of Construction of the Consolidated Gas Company of New York. I have been employed by that company about twenty-three years, during which period I have been employed by it as a draftsman making both detail and design drawings for the construction of gas works apparatus, including their foundations, for the buildings for gas plant

that is, such buildings as office buildings, shops, warehouses and garages, oil storage tanks and coal handling and coal storage apparatus and equipment. I have also been employed in making estimates of costs for all such construction work, and as a field inspector on such work I have supervised such work while under construction, including buildings, gas holders and gas works apparatus [fol. 514] equipment. I have negotiated with contractors for the construction of such gas works, buildings and apparatus and made comparative studies of the proposals submitted by contractors for such work. I have analyzed the cost of such construction work after it had been performed and have made adjustments with contractors as to their compensation. I have purchased the materials required for gas works construction. These duties have extended to and included the plants and properties of the Consolidated Gas Company of New York and all of its affiliated gas companies. I have inspected all of these plants and properties frequently for the purpose of maintaining them and keeping them in repair and improving and extending them. My present duties are to have immediate charge of all construction and major repair work at all of these plants, buildings and properties.

I have testified for the Consolid-ed Gas Company and its affiliated gas companies concerning the extent and uses of plants, buildings and properties in the rate cases which were tried in the years 1919, 1920 and 1921 in the United States District Court, the New York Supreme Court and before the Public Service Commission; in two condemnation proceedings having to do with the Chelsea Improvement on the North River; in a condemnation proceeding growing out of the dock improvement at West 44th Street on the North River; in a Federal condemnation proceeding in which a site was taken for a Post Office in the City [fol. 515] of Yonkers; in a condemnation proceeding for the extension of the Willard Parker Hospital at 15th Street on the East River; in street opening proceedings before the Board of Assessors, and in several street main extension cases before the Public Service Commission. In all of these legal proceedings I have prepared and testified to many maps and diagrams of the land, buildings and other properties, which were presented as exhibits.

I am a member of the American Society of Mechanical Engineers, the American Gas Association, the Society of Gas Engineering, and I have the gold medal of the American Gas Institute.

I have contributed technical papers to the American Gas Institute and have written for the technical press, dealing with gas engineering, in both the United States and England. [fol. 516] More specifically, my work and my course of duties in respect to construction of buildings and the installation of apparatus on properties of the Consolidated Gas Company, and also my work and my duties in respect to the maintenance of these properties has been to examine into and report upon the necessity of proposed improvements, make all estimates as to the cost of these improvements, make studies and reports as to the design of the improvements, supervise the designing of the improvements, supervise the preparation of the specifications, obtain proposals from contractors, make comparisons with the contractors' bids, supervise and inspect the work while under construction, adjust claims for extra compensation claimed by contractors, make analyses of the cost of the work when completed, prepare memoranda for the accounting department as to any withdrawals which result from extensions and improvements at the existing plants, and in the construction of purifiers, condensers, gas holders, and other apparatus, I charge them with gas and turn them over to the operating department for service.

In regard to the maintenance, I both personally inspect and supervise the inspection by subordinates, of the buildings, plant, and equipment of the Consolidated and its affiliated gas companies.

[fol. 517] I make recommendations to my superiors as to improvements and extensions at the various plants of the company which may be desirable in my opinion and, if approved by them, either as recommended or with modifications, I proceed to carry out the work along the lines that I have testified to in the last few minutes—that is, having the designs made, specifications, obtaining bids, and all work of the nature; this applies to changes, supercessions and improvements.

Many times over a long period of years—including 1921, 1922, 1923 and the elapsed portion of 1924, I have visited

the sites of the various properties and observed their [fol. 518] condition and use, and in the course of my duties I have examined the deeds and the other instruments of title of the plaintiff company, with respect to the location and the extent of the lands of the plaintiff company, as set out in those deeds and title papers, every one of them some time, and many of them many times. I am familiar with the deeds and other instruments of conveyance to the plaintiff company, which were placed and also the descriptions of the land as set forth in those deeds. I am familiar with the use of the lands and structures and other property on them, during the years 1922, 1923 and up to about this time—March 1924.

I have prepared a number of charts or diagrams for the purpose of showing the land claimed to have been owned and used by the Consolidated Gas Company in its gas business as of June 1st, 1923, and also the land since acquired and used and useful in its gas business.

Each of the diagrams numbered 1 to 20, and marked Plaintiff's Exhibit 258 for Identification, was prepared by me or under my immediate supervision. The physical work of draftmanship was done by one or more of my assistants to whom I gave the direction. They were checked by me afterwards. I obtained the description of the boundaries and dimensions that are shown upon these diagrams 1 to 20, principally from the deeds; in some cases from title insurance surveys, and in respect to Block 991, Lot 1, from the judgment of the Supreme Court. With respect to the diagrams obtained from deeds and instruments, I referred [fol. 519] to the deeds and instruments that have been put in evidence in this case. I compared these diagrams with the tax maps for the purpose of identifying the block and lot numbers shown on the tax maps, for the parcels of land corresponding with the parcels shown upon diagrams 1 to 20, and have noted on these diagrams 1 to 20 such block and lot numbers of the land; that is, as they appear on the City Tax Maps. In some instances I showed on these diagrams smaller areas of land than those described in the respective deeds covering them. Where some of the land conveyed to the company by the deed in evidence is not claimed to be used or used in the gas business at the present time for the purposes of the present trial, or

where some of the land has been taken in condemnation proceedings, by the City of New York, or where some of the land has been sold.

I have shown in these diagrams only the lands which are owned by the Consolidated Gas Company and which the company claims for the purposes of this trial to be used and useful within the years 1922, 1923 and up to about this time—March 1924, or some part of that period.

With respect to parcels of land which the company still owns, but which for the purposes of this trial this company is not litigating as used and useful, I have not shown those in these diagrams. The blue-shaded area on these diagrams [fol. 520] 1 to 20 in Plaintiff's Exhibit 258 for Identification, indicates the land owned by the Consolidated Gas Company and used and useful to it in the gas business during the year I have mentioned. Each diagram correctly describes the boundaries of the land according to the deeds or other instruments in evidence relating to the land covered by the respective diagrams. Referring to certain of the parcels of which the areas shown on the diagrams are less than those shown by the deeds because of the sale of part of the parcels described in the deeds or because of the fact that the company does not in this case claim that during the period litigated in this trial such property is used or useful in the gas business, and referring first to the so-called Kings Bridge holder station property in the deeds, that is shown on the diagram sheet 19, showing the property as bounded on the east by Sedgwick Avenue. I show less than the area described in the deeds and instruments because the City changed the line of Sedgwick Avenue and West Fordham Road, in connection with street improvement proceedings.

Referring to Sheet No. 16, Block 1999, Lot 1, a larger portion of the property in that block conveyed by deed was sold to the Fifth Avenue Coach Company in 1916.

With reference to Sheet No. 8, the larger part of the property conveyed to the Consolidated Gas Company by [fol. 521] the deeds in evidence was taken by the City in a condemnation proceeding, and other areas have been sold, and in Block 1992 there are three lots not claimed by the company as being presently used and useful in the

gas business. At 11th street there is no land that is not presently used and useful.

As to the 42nd Street station shown in Plaintiff's Exhibit 258 for Identification sheet No. 7 a portion of the land conveyed by the deeds was sold by the company prior to 1921 or 1922.

With respect to the 14th Street coal gas station, there are portions of the land shown in the deed and instruments of title in evidence which have been taken by the City by condemnation proceedings and parts which have been sold by the plaintiff company. Referring to the Sheet 3, Block 989, it is shown on the westerly portion tinted. The deeds conveyed all of that block, a portion of which was sold and a portion of which was taken by the City of New York in a condemnation proceedings. They also took in the same proceeding a portion east of Avenue D between 15th and 16th Streets, and also the bulkhead on the East River between 15th and 16th Streets.

With respect to Sheet 20, the Hunts Point manufacturing plant site, the deeds in evidence show more than the [fol. 522] area set forth there as claimed in this action, for the purposes of this trial, to be used and useful at this time. The deeds convey to the company certain outlying lots which are not claimed as being presently used and useful in the gas business. (Plaintiff's Exhibit 258 for Identification received in evidence.)

I have prepared in a similar manner sheet numbered 21 and marked Plaintiff's Exhibit 259 for identification, which shows the land owned and used at the Astoria manufacturing plant. This was prepared from deeds and instruments of title which are here in evidence, and shows the property used and useful in making and distributing gas as of June 1, 1923, and since that time. This diagram describes the land comprising this plant, according to the deeds here in evidence. It was prepared by me in the same manner which I have described in more detail with respect to Exhibit 258. (Plaintiff's Exhibit 259 for identification received in evidence.)

With respect to Exhibit 259, the deeds in evidence show a greater area than is set forth in that Exhibit. The Exhibit shows only the land which was during 1922 and 1923

and has up to this time been used and useful in making and distributing gas.

I have prepared for convenience, in referring to the locations of the various stations and offices and properties of the plaintiff, a map of the Borough of Manhattan and the [fol. 523] adjacent territories in the Boroughs of The Bronx and Queens, showing the general layout of the offices, works, stations, shops, yard and lands of the plaintiff company and the Astoria Light, Heat & Power Company, namely the various properties which are shown on Exhibits 258 and 259. Without effort at mathematical, surveying accuracy as to the location, this indicates the general location of the various properties and general contour of Manhattan Island and its waterways.

[fol. 524] [With reference to Diagram 1 of Plaintiff's Exhibit No. 258, showing land in Block 239, Lots 1 and 5, located at Hester and Elizabeth Streets in the Borough of Manhattan, the witness described the buildings and improvements located on the land identified as Lots 1 and 5 of Block 239, used as the headquarters of the meter department in that district, a meter and appliance shop, a branch office, headquarters of the emergency wagon service, office of the district superintendent of the department of mains and services, and storage of fixtures and appliances. The witness also described changes and improvements made with respect to these properties comprising the Hester Street branch commercial office and shop, since June 1, 1923.

Referring to Diagram 2 of Plaintiff's Exhibit No. 258, showing land in Block 368, lot 1, Block 369, Lot 1, and Block 382, Lot 22, located on Avenue D, between East 11th Street and East 13th Street, the witness testified that the property was on the parcels of land formerly known as the manufacturing station of New York Mutual Gas Light Company, and that this station formed part of the property transferred to the plaintiff on September 1, 1922. On this map there is a part which is shown on the right-hand side on the diagram in dotted lines, and which embraced bulkhead property and waterfront property belonging to the [fol. 525] City of New York, held under a lease by the plaintiff acquired from the New York Mutual Gas Light

Company. The piers, bulkhead, and upland are used continuously by the plaintiff in connection with the manufacture of gas at the 11th Street station, and the plaintiff pays to the City rent for their use.

The witness described the buildings and improvements located on the land embraced in Blocks 368, 369, and 382 shown on Diagram No. 2, and their use, as of June 1, 1923, comprising the 11th Street manufacturing plant.

(Diagram received in evidence and marked Plaintiff's Exhibit 260.)

On Plaintiff's Exhibit No. 260 there are two properties which are used in the service of consumers of the plaintiff but which are rented by it, to wit, the branch Consolidated office at 1911 Amsterdam Avenue, near the corner of 155th Street and Amsterdam Avenue, and the 124th Street storehouse, located on the south side of West 124th Street just west of Amsterdam Avenue and rented from the Standard Gas Light Company and used for storing gas appliances and fixtures.

With reference to the blocks and lots contained on diagram 3 of Plaintiff's Exhibit 258, embracing property between 15th and 16th Streets and on Avenue C, those were properties which were described as the 14th Street coal gas plant and accessory holder station of the Consolidated Gas Company. All of the land shown in the blue tint on diagram No. 3, except Lot 1 of Block 989 has been sold by the plaintiff since June 1, 1923, all of the lands and the properties, with the exception of Lot 1 of Block 989 has been retired from use by the Consolidated Gas Company, since June 1, 1923. The sale of those parcels of property is shown by deeds which were placed in evi- [fol. 526] dence in this case yesterday.

Referring to Block 982, Lot 13, along the easterly side of the block, that is the westerly side of Avenue C, and extending from 14th to 15th Street, was a brick purifying and meter house. The building contained 12 cast iron purifiers, together with center seals, gas piping and gas valves, and overhead cranes for lifting the covers of the purifier boxes. The adjacent meter house contained 2 station meters of the wet type with rotating drums. The area to the west provided the space for the revivication

of the oxide. The property to the west of the purifier house was enclosed by brick retaining walls. There was no change in this property or its use down to the time of this sale on October 30, 1923. With the exception of the buildings on the east end, the rest of the lot was partly used for purposes other than revivifying. The construction department, for instance, has to have a tremendous amount of storage space at times and I use that very largely for the storage of construction material. The land there was actually and actively used. Sometimes we have not enough storage space; sometimes it is not adequate for our needs and it is a fluctuating condition.

On June 1, 1923, the main coal gas manufacturing apparatus pertaining to this station was located on Block 988, Lot 1. This block was the main part of the coal gas manufacturing plant, and it had the various buildings, structures and equipment, including retorts, which go to [fol. 527] make up and are necessary for such a plant.

The easterly end of the block, extending from 14th to 15th Street, was occupied by a brick coal storage building, as of June 1, 1923, and theretofore, and also the 30th of October, 1923. There was no change with respect to this property, the buildings or improvements, which were used down to the 30th of October; they remained there, in use. This brick coal shed extended across the entire easterly end of the block and was 185 feet wide and provided with a power-driven coal distributing apparatus for drawing the coal brought into the building from the bulkhead. On the westerly side of the building there was machinery for reclaiming the stored coal, placing it in cable-driven cars, by means of which it was carried westward to the retort house, the retort house being a building near the westerly end of the block, extending from 14th to 15th Streets, and about 250 feet long, and in the extension on the easterly end of the retort house there were overhead hoppers, and the conveying system deposited the coal in these overhead hoppers. The equipment in the retort house included 144 benches of retorts, and all of these benches of retorts, *and all of these benches of retorts* were served by mechanically operated charging and discharging machinery.

[fol. 528] A retort resembles a pipe or tube and is usually in a cross section known as flat D section; that is, it resembles the letter D laid on its side and its dimensions usually are about 24 to 26 inches wide and, say, 20 inches deep, and in varying lengths, from 10 feet to 20 feet, and these retorts are clustered in groups in a setting of fire brick, and such a cluster or group of retorts is described technically as a bench, and the adjacent groups of benches are known as a range of benches. The retorts are heated by a fire in a furnace below the bench. These furnaces are charged with some of the hot coke which has been withdrawn hot from the retort and charged into the furnace, and the retorts are heated externally by the heat of this furnace, and they are raised to a cherry-red heat and then the coal is charged in and distributed along the length of the retort, and the retorts are then hermetically sealed by cast iron mouth pieces, and there are pipes that rise from the mouth piece and connect into what is known as the hydraulic main, which is a pipe half filled with water, and the vertical pipe that takes the gas off from the retort and drops down into the water about half an inch, the purpose of that seal being to prevent the gas from going back. That heat is carried on there for 46 hours, and during that time the fuel in the retort cannot burn and it be-[fol. 529] comes carbonized—a molten mass of about the consistency of molasses,—that is, the gas coal in the retort. There is no combustion that takes place in there; it is a carbonization. Now, in the process of destructive distillation into the gas, the hydrogen and other gases are carried off and withdrawn from the hydraulic main by an exhauster, and when the heat has been carried the scheduled length of time, the retort is opened and the discharging machine withdraws the hot coke, which is then quenched and becomes the commercial product with which we are familiar. Although we use it very largely now in the manufacture of water gas a certain portion of it is also used in heating the bench; in other words, these benches are somewhat self-sustaining as to the heating by coke.

Gas coal is a kind of highly volatile bituminous coal; coal gas is made by a destructive distillation of gas coal. What is called gas house coke is what is left of the gas coal after

this distillation. That is the coke which is used in water gas manufacture, and it is also used for heating the benches in coal gas manufacture.

By the Master: The gas is treated after it is drawn off these retorts as follows:

It passes through the hydraulic main and, in going from the pipe called the stand pipe, it comes up from the retort and drops down into the hydraulic main and deposits into the main ammoniacal liquor and then the tar. The tar [fol. 530] is being carried along in the gas at that time in the form of minute globules of tar, each one enclosing a small volume of gas, and when these globules of tar come in contact with the liquid in the hydraulic main—I describe it as liquid because, after the bench has been in operation for some length of time, it contains something more than water, it contains a great deal of tar of varying gravity, and also quite some quantity of ammoniacal liquor. Now, these globules coming in contact with that, they are ruptured in part by the contracts with the fluid, which mechanically punctures the globule and releases the gas and also the drop in temperature it experiences when it comes in contact with the fluid. The gas is drawn from the hydraulic main by the exhauster. In other words, it is necessary to maintain a vacuum in the main above the fluid. After that it goes over the condensers, the scrubbers and purifiers, the purification resembling water gas purification to a considerable extent.

By Mr. Dawson: There is more purification in the case of coal gas than water gas, and there isn't any water gas added to. We did not employ that process at this plant. In the manufacture of gas in these retorts coal gas is produced; blue gas is produced from the water gas machine. To bring it to candle power, you mix it with water gas. The gas from the 14th Street plant was mixed with water [fol. 531] gas from the 21st Street plant. This was the method of enrichment pursued with respect to coal gas at the 14th Street plant. After the retort has been discharged it is recharged by a charging machine which distributes fresh fuel in along the length of the retort, when the retort is again hermetically sealed and the process continues through those cycles as before; it being the practice, however, in the operating of coal gas benches, not to discharge

and recharge all of the retorts in one horizontal row on the same cycle. They usually take every second retort, or every third retort; usually not each retort as they go along. Then they drop down a tier and discharge and recharge each alternate retort down there, and so the thing goes on through endless cycles. Approximately the thermal content, in British thermal units, of coal gas as it comes from the retorts, or it were no enrichment by the use of oil, depends largely on the fuel used and the time the heat is carried. It is very greatly affected by the time the heat is carried. I would not want to state any figures as to thermal content that were in conflict with the records for the 14th Street Station, for I have not now got them in mind. I have described, I might say, substantially the coal gas equipment at the 14th Street plant. These retorts are horizontal; there are also vertical and inclined retorts.

[fol. 532] By the Master:

After the coal gas is enriched with the water gas, it is then in the state in which it is furnished to the consumer. That is commercial gas. A coal gas process is contin-ous and the water gas process is intermittent; therefore, the water gas plant requires no relief holder. The water gas and coal gas are mixed here at this plant in the storage holders on Block 989 in the storage holder. It does not go through any other process before it is drawn from there for commercial use.

By Mr. Ransom:

Sometimes it is mixed in the mains in the plant; and in Toronto, at the big works there, I saw a very intricate arrangement of pipes. The water gas went in at one end of a large 48-inch pipe and the coal gas at the other end, and made one chase the other through a lot of circuitous connections, and they called it mixed.

The system of the manufacture and distribution of gas by the Consolidated Company and its affiliated gas companies on the transfer *sh*stem is based upon a mingling of coal and water gas.

I was describing the retort benches of the 14th Street plant as being served by mechanically operated charging

and discharging machines. All of the machines travelled on what might be described as railroad tracks laid east and west in the building. The charging machines were arranged so they could be run under their own power into the easterly extension of the retort house, where they received a charge [fol. 533] of gas coal in the hopper of the charging machine from the overhead hoppers in the building that I have already described, these overhead hoppers being filled with coal through a conveying system which it connected with the coal shed at the easterly end of the block. The coke discharged from the retorts was carried in buggies out into the yard, both east and west of the building, and dumped for cooling and quenching. Between the retort house and coal shed there were some wooden tanks for the accumulation of the tar and ammonia. The retort house in addition to the retort benches was equipped with tar and ammonia and water circulating lines, gas mains, the gas offtake mains for taking the gas from the retort benches to the purification apparatus located to the west. Along the westerly end of the block were brick buildings extending from 14th to 15th Street, the 14th Street corner being a two-story office building and accommodations for the clerical staff of the works. Adjacent to that was a tin shop and work shop and storeroom for miscellaneous small supplies required in the works.

The next building in the middle of the block was an engine and boiler house, the engine driving the shafting for the machinery located upstairs in the building, which then extended up to 15th Street, and contained metal and wood working machinery used by the repair gangs in the plant. [fol. 534] Downstairs in the building there were three exhausters used in pulling the gas from the hydraulic mains that I have previously described, and sending it through the purifying equipment. There were two multitubular condensers, two tower scrubbers and a rotary washer scrubber, these scrubbers being for removing the ammonia from the gas. In addition to this apparatus that I have described in detail there were also underground and overhead the miscellaneous gas mains, together with valves, drip pots and other accessories, steam lines, water lines and tar lines, and ammonia liquor lines. That completes my description of that block.

The Consolidated Gas Company has no coal gas plants in operation now in the Borough of Manhattan, nor have any of its affiliated gas companies. Prior to October 30, 1923, there was another coal gas plant of the plaintiff company in the Borough of Manhattan besides this 14th Street plant, at 42nd Street on the North River, over by the West Shore Ferry, that was a coal gas plant exclusively. That was sold by the plaintiff company, on the 31st of October, 1923. The 14th Street plant had a daily capacity of 5,000,000 cubic feet and West 42nd Street 4,500,000 cubic feet. They were in use at that daily capacity up to the day we started to tear them down. At or about the time in 1923 we disposed of these two coal gas plants and retired them from use, we completed and made available plant capacity in the Borough of Manhattan at the 21st Street station, corresponding to [fol. 535] those. A capacity of 9,500,000 cubic feet of water gas was added, which brought that plant up from 28,500,000 to 38,000,000 cubic feet of gas per day and was provided for the purpose of enabling the retirement of these two coal gas plants. Both coal gas and water gas are made at Astoria. Coal gas is made in some quantity at the Central Union Works, in the Borough of the Bronx, where they have quite a considerable coal gas plant. With the retirement from use of the 14th Street and 42nd Street plants and providing of equivalent manufacturing capacity for water gas manufacture at the 21st Street plant, there is no longer coal gas manufacture in progress in the Borough of Manhattan. The 9,500,000 cubic feet additional daily capacity at 21st Street has been available during the winter of 1923-1924.

Block 991, Lot 1, the buildings and improvements, as of June 1st, 1923 and theretofore, was enclosed by a retaining fence and it was used for the storage of coal. It would accommodate trimmed about 30,000 tons of coal; either bituminous or anthracite could be stored on the block. We had last stored anthracite. In the manufacture of coal gas, soft coal—bituminous coal—what is known as caking coal, is used, and anthracite is used in the manufacture of water gas. In relation to this particular plant we did not use any [fol. 536] anthracite coal, but had it stored there, because of insufficient storage space elsewhere in this section of the city. There was no change in the buildings or struc-

tures or improvements, or in the use of this land, from June 1, 1923 to October 30th. We also have water gas plant at 11th Street.

Anthracite coal was stored on Block 991, Lot 1, because we had not in this section of the City sufficient storage space elsewhere for anthracite coal. We have water gas plants at 21st Street and 11th Street, and at times we use part of this Lot 1 for anthracite storage.

The property in Block 989, Lot 1, is known as the 15th Street holder station. As of June 1, 1923, on Lot 1 of Block 989, along the westerly end of the property, occupying the larger part of the area, is a gas holder and steel tank having a storage capacity of 3,300,000 cubic feet. At the southeasterly corner of the block, or Lot 1, rather, is a brick and steel governor house containing pumping equipment used in connection with the distribution of gas in this locality. The building contained a Roots' Exhauster having a capacity of 68 cubic feet per revolution and a Connorsville exhauster having a capacity of 84 cubic feet per revolution, these exhausters being driven independently of each other by direct connected vertical steam engines. The building also contained a Sturtevant centrifugal booster driven by a Sturtevant steam turbine.

In the building there was also an extensive system of gas valves and gas connections used in pumping the gas, and in connection with the holder steam lines, water lines, drain [fol. 537] lines, pressure gauges and other miscellaneous equipment. In the rear of this pumping station is a one-story brick boiler house containing three Babcock & Wilcox boilers, each of 140 horsepower, equipped with feed water heater, steel smokestack, steam lines, water lines, boiler feed pumps, blow-off lines and blow-off tanks and miscellaneous small equipment. Adjacent to the holder was a steel tank for the accumulation of drip oil.

This parcel of land and the buildings and structures or improvements thereon remained continuously in use since June 1, 1923, and still are in use.

The gas which is now kept in the holder comes from the 21st Street station. That is still, as it always has been since its erection, one of the holders furnishing the gas and maintaining the pressure on that part of the district. The way the plants are hooked together that has been the situation for years, and the gas that comes into that holder

from 21st Street may not have been made at 21st Street; there is a pumping station at 21st Street. This holder was not used exclusively for gas manufactured in any particular plant, and the gas that goes into a holder situated as this was with respect to the main connections, is not earmarked or identifiable.

[fol. 538] Lot 47 of Block 991 is the bulkhead between the north side of 14th Street and the south side of 15th Street. At this bulkhead were moored the barges which brought the coal to the plant and those that took away the tar and ammoniacal liquor.

The only change in the use or the physical situation with respect to Block 991, Lot 47, between June 1, and October 30, 1923, was its disconnection from the coal gas plant prior to tearing down the latter. On the east side of Marginal Street, on Lot 47, there was only a bulkhead.

Adjacent to and east of Lot 1 of Block 989, between East 16th and East 15th Street, Borough of Manhattan, there is a plot of land occupied by the New Amsterdam Gas Company. I have prepared a diagram showing the area of land embraced in Lot 1, Block 989 of the Consolidated Gas Company, and the area of the adjacent land embraced within Lot 16 of the New Amsterdam Gas Company. The Consolidated Gas Company makes use of Lot 16 of Block 989 and on or about June 1, 1923, and theretofore, made use of the land and improvements on that lot. Located on that lot was a gas holder having a capacity of five million cubic feet, which was connected to the adjacent holder on Lot 1, through a system of mains which passed through the pumping station, so that the five million cubic foot holder belonging to the New Amsterdam Gas Company is used jointly with the other holder belonging to the Consolidated Gas Company.

(Diagram received in evidence and marked Plaintiff's Exhibit No. 261.)

[fol. 539] [Referring to Diagram 5 of Plaintiff's Exhibit No. 258, showing lots 7, 19, and 20, Block 985, located between East 17th and East 18th Streets, Avenues B and C, used as a blacksmith's shop by the Department of Mains and Services and for the storage of cast iron pipe valves, fittings, joining material, and rigging, the witness described the buildings and improvements located on that land and

the use which was made of the land and improvements of the plaintiff on or about June 1, 1923, and described also the changes or improvements in the property or in its use, subsequent to June 1, 1923.

[Referring to Diagram 6 of Plaintiff's Exhibit No. 258, showing the various parcels of land comprised generally in the 21st Street manufacturing station of the plaintiff, at which carburetted water gas was produced, the witness described the buildings and improvements which were located on Block 951, Lot 35, Block 952, Lots 7, 35, 30, and 29, Block 953, Lot 1, Block 978, Lots 5 and 6, Block 987, Lot 37, Block 979, Lots 1 to 27, and the use made of such buildings and improvements by the plaintiff as of June 1, 1923, and subsequently, the manufacturing capacity of the 21st Street plant as a whole on June 1, 1923, and thereto-
[fol. 540] fore, was 28,500,000 cubic feet of gas per day; the plant had then thirteen 12-foot generators with a capacity of around 2,500,000 cubic feet per day; at or adjacent to this plant were one storage holder of 1,500,000 cubic feet capacity, and four storage holders of 400,000 cubic feet capacity each, or a total of 3,100,000 cubic feet of storage capacity; there were also two relief holders each of 350,000 cubic feet capacity. On June 1, 1923, the plaintiff had begun the construction of an additional 3,000,000 cubic foot holder. Among other facilities located on the land, there was a brick building on Lot 30 of Block 952 used for the storage of supplies belonging to the lighting division of the company's commercial department, and also for the storage of materials for the plaintiff's carpenter force which does repairs around at the branch offices. The headquarters of the carpenter force were in a building on the corner of 20th Street and Avenue A. Lot 29 of Block 952 has ordinarily been used for large pipe storage, and before it had been currently used in connection with the construction of the new holder. The construction work on the new holder is practically completed. Lot 1 of Block 953, on the First Avenue frontage, from 21st to 22nd Streets, is occupied in part by the central garage of the plaintiff.]

[fol. 541] The witness further testified:

Direct examination by Mr. Ransom:

For the purpose of enabling the sale and retirement of the 14th and 42d Street manufacturing plant there was

provided equivalent manufacturing capacity at the 21st Street station during the year 1923. As to the changes in the equipment and structures, with respect to the use of the different parts of the property at the 21st Street plant, which have taken place since June 1, 1923, in connection with this providing of the nine million and a half of additional cubic feet of daily capacity, the additional capacity was represented primarily by the addition of two more water gas generators. These machines are equipped with waste heat boilers and high pressure blowers, independently operated from the remainder of the generators. The two new generators were ready for operation around Christmas of 1923. The machines are being operated without the waste heat boilers, which are still under construction, as it is not necessary to complete the waste heat boilers in order to make gas on these machines. These machines were in operation before the heavy winter demand came on. In connection with this additional manufacturing capacity, there have been or are being installed additional [fol. 542] gas mains, steam lines, oil lines, water circulating lines, and additional water circulating pumps and tar pumps, oil pumps, an additional 2,000 tube condenser, the latter completed in December, an additional tar seperator, two additional 600 horse power boilers which are to be equipped with chain-grate stokers, and an overhead boiler fuel hopper which will receive coal from the conveying system, the boiler fuel being reclaimed by a screening equipment in transit to the generator house, a new engine exhauster, a new boiler feed pump, a new circulating pump, and new hydraulic pumps, and a new suction pump for the hydraulic pumps. The portions not yet complete are the two 600 horsepower boilers, the waste heat boilers, and the tar separator. The charging lorries for charging the generator and weighing the coal were installed and in operation, and we are adding another one, which is not yet complete. In connection with these extensions, there were considerable alterations made to the generator house building which are complete now. There were four additional steel purifier boxes installed in 1923, which are now in service, and they were under construction on June 1st, a previous installation having just been completed. The two 12-foot

[fol. 543] scrubbers were ready about December, 1923. The two 16-foot station meters are not complete yet, but are still in course of construction. The steel storage hoppers for installing generator fuel in the generators were complete on June 1, 1923, and the steel storage hopper for boiler fuel was complete on June 1, 1923. The main part of the coal handling and conveying equipment which effected changes in the system of coal handling and conveying machinery had been completed on June 1st, and some additional features are being added in connection with the two new Babcock & Wilcox boilers. Also, in connection with the providing of additional capacity, there has been put in one 3,000,000 cubic foot storage holder.

By the Master:

There are ten underground gas tanks for holding gas oil, at 27,000 gallons each, or 270,000; and there are twelve of them at 15,000 gallons, making a total of 450,000 gallons in those underground tanks, and we have the other tank over in Block 987 that holds 500,000 gallons. That is a total oil storage tank capacity of nearly a million gallons.

Sheet No. 4 of Plaintiff's Exhibit No. 258 shows Block 870, Lots 47 and 60, situated at the southeast corner of Irving Place and East 15th Street, in the Borough of Manhattan, on which is located what is known as the general office building of the Consolidated Gas Company. I designed [fol. 544] the foundations and structural steel work of the building at the time it was built, and laid out and located all the steel columns, fixed their spacing and dimensions, supervised the construction of the foundations and the structural steel work from the designing to the erection of it. I supervised the inspection of it in the shops of the contractors who fabricated the steel. As the building reached a more advanced stage of completion, I had contact with the completion of other features of the building.

The building as it stands today, with its general architectural features, was built in 1913. It consists of nineteen stories, having eighteen full stories and a roof story. The building occupies Lot No. 60 of Block No. 870, and there is a two-story extension on Lot No. 47. The Construction De-

partment of the Consolidated Gas Company has supervision of the operation of the building. As a member of that department, I have had frequent and continuous occasion to become familiar with all the various parts of this General Office Building. This building is being used by the Consolidated Gas Company, and in part by gas companies affiliated with the Consolidated Gas Company and by electric companies affiliated with it. As a result of my observations of the various portions of the building, I prepared a set of diagrams showing the occupancy of each floor of the [fol. 545] building by the Consolidated Gas Company and by others.

In preparing these diagrams, I have undertaken to show in different colors the different occupancies of the building. The space occupied and used by the Consolidated Gas Company is shown in pink. The facilities operated and used by the Consolidated in its business and also for the benefit of its tenants is shown in blue. The space used exclusively by tenants is shown in yellow. The corridors, stairways, vestibules, and the like are shown in white. These diagrams correctly show, to my knowledge, the occupancy of each floor of the building according to the classification of occupancies as of June 1, 1923.

(The diagrams offered in evidence and marked Plaintiff's Exhibit No. 262.)

I am familiar with the use made by the Consolidated Gas Company of the different portions of the building on the different floors, which are shown on Plaintiff's Exhibit No. 262 in pink, and also with the use made by the different tenants, which are affiliated gas and electric companies. I have prepared a schedule entitled "Table of floor space, General Office Building, 15th Street and Irving Place," based upon the space occupied as of June 1, 1923. Plaintiff's Exhibit No. 262 is in graphic form, and this table is arithmetical.

(Table offered in evidence and received as Plaintiff's Exhibit No. 263.)

[fol. 546] [Referring to the diagram, Plaintiff's Exhibit No. 263, and the arithmetical statement of the same set forth in Plaintiff's Exhibit No. 263, the witness described, in de-

tail what use was made by the Consolidated Gas Company on or about June 1, 1923, of the various portions of the General Office Building, and what changes in such use had [fol. 547] taken place since June 1, 1923.]

Diagram No. 7 of Plaintiff's Exhibit 258, showing Lot 1 of Block 1089, Lot 7 of Block 1107, and Lot 23 of Block 1090, describes the proprety known as the 42nd Street coal gas plant. This is the land or part of the land that was sold by the Consolidated Gas Company since June 1, 1923, all having been sold except the parcel indicated as Lot 23 of Block 1090.

The property comprised in Lot 1 of Block 1089 and in Lot 7 of Block 1107 was retired by the Consolidated Gas Company after June 1, 1923, by the sale of the property and the demolition of the buildings and structures.

Lot 23 of Block 1090 has lapsed into the category of property not used or useful in the gas business. Beginning at the left hand end of the map where in the hatched area it shows a pier, the coal was received at that pier and loaded by unloading machinery on two levels. It was a double-deck pier equipped with narrow gauge railroad tracks on which ran coal cars. The coal cars were filled by the unloading machinery and run on the two decks of this pier inward on the solidly filled grounds and across trestle, where the coal was dumped in the storage areas lying between [fol. 548] 41st and 42nd Streets and near the river front. Along the bulkhead and each side of the pier were tanks for the storage of gas oil and ammonia. At the easterly end of the block was a gas holder and a brick building containing a governor for controlling the pressure of the gas sent out on the district. West of the holder was a purifying house containing 16 purifier boxes of the wet seal type for purifying the gas made in the plant. The holder has a capacity of about 250,000 cubic feet. This plant was tied in the holders at the 44th Street station. In the brick building at the south side of 42nd Street, west of the holder, were the station meters, there being three, and also an engine and exhauster.

The second floor of this building was occupied by the Superintendent's office and by the laboratory, and the room in which there was the photometrical equipment.

Along the south side of West 42nd Street, in the middle of the block, was the main retort house, a building about 285

feet long, in which there were sixty benches of retorts in three ranges. These retorts had fences which occupied the basement of the building, the retorts themselves being elevated some distance above the basement floor. The easterly end of this retort house was occupied by condensers and scrubbers.

[fol. 549] Along the north side of 41st Street, in the center of the block, were two retort houses, each containing one range of retort benches, that is, horizontal coal gas retorts, similar to those in the building first described, and to the east of these retort houses were two brick buildings, one of which contained the exhausters for drawing the gas from the hydraulic mains, and the other containing the condensers, srubbers and also a rotary washer.

In an underground vault or basement under the yard between the two retort houses were the three steam boilers, supplying the steam for the plant, a blacksmith shop, machine shop, and rooms in which were stored miscellaneous supplies and materials. In addition to the equipment I have described in detail, there was an extensive system of gas mains, both underground and overground, and also steam mains, water lines, tar lines, ammonia lines and drainage lines. The property was partly enclosed by brick fence walls.

In the area occupied by Lot 23, Block 1099, was a one-story brick building used as an office for the sale of the coke which was made as a by-product in this plant. This office was equipped with a platform scale on which the wagon-loads of coke could be weighed. The coke which was accumulated from this plant and put on sale was stored across the street. This plant has a capacity of four and a half million cubic feet.

[fol. 550] By the Master:

Between the 1st of June and the 31st of October there had been no changes in the condition of this plant or additions to it; it remained the same. It was held as reserve capacity, the same as any other reserve capacity; it was not actually making gas during this period.

By Mr. Ransom:

Prior to October 31, 1923, no part of the manufacturing apparatus of this plant was disconnected, nor any connections between the plant itself and the transfer system.

By the Master:

We got the coal for this plant from the pier down here on the river front shown in that shaded area. We are on the North River now. When we sold the plant—the 31st of October, we stopped making gas there. Gas was last made there in 1918.

By Mr. Ransom:

The apparatus was kept in operating condition.

By the Master:

That was the fact also in regard to the 14th Street plant, that was held as reserve plant, that plant had been last operated, I do not recall whether it was 1918 or 1919. You see, the Government had had the use of that plant during the war. The holders on these two properties were used. This holder I have just described at 42nd Street, I purged the gas out of, but not until about the 19th of November I think; that is, after the sale of the property.

After the dates I have mentioned the Superintendent of Distribution of the West 42nd Street Station was also Superintendent of the 44th Street Holder Station, which was tied in to the 42nd Street, and the control of the distribution pressure in that district was handled there at 42nd Street. There was a district governor there, and at 14th Street the office was occupied by the local superintendent. [fol. 551] The shops along the east side of Avenue C, between 14th and 15th Streets were used for repair work and maintenance work. There was coal in the coal shed.

[Referring to Diagram 8 of Plaintiff's Exhibit No. 258, showing Lot 16 of Block 1092, and Lot 9 of Block 1093, lying between West 44th Street and West 46th Street, west of 11th Avenue, the witness described the buildings and improvements which were located on that land and what use was made of the land and improvements by the plaintiff on or about June 1, 1923. This property is known as the

44th Street Holder Station, and included, among others, four gas storage holders each of a capacity of 375,000 cubic feet, and one gas storage holder of a capacity of 2,000,000 cubic feet.]

New York, March 5, 1924.

[fol. 552] Met pursuant to adjournment.

HERBERT W. ALEICH, a witness called in behalf of the plaintiff, resumed the stand:

Direct examination (continued by) Mr. Ransom:

[Referring to Diagram 9 of Plaintiff's Exhibit No. 258, showing the property in 57th Street occupied as the 57th Street Commercial office the witness described the buildings and improvements which were on this land as of June 1, 1923, and the use by the plaintiff of the land and the improvements and structures thereon, as of that date as well as subsequently.

[Referring to Diagram 10 of Plaintiff's Exhibit No. 258, showing the property in East 62nd Street between First Avenue and Avenue A, occupied by the plaintiff as a holder station, the witness described the buildings and improvements located on Block 1457, Lot 6, and the use made of the land and the improvements by the plaintiff on or about June 1, 1923, and theretofore, as well as subsequently. Among the structures was a gas holder with a brick tank having a storage capacity of 5,000,000 cubic feet.

[Referring to Diagram 11 of Plaintiff's Exhibit No. 258, showing the property in Avenue A, between East 63rd Street and East 62nd Street, the witness described the [fol. 553] land in Lots 15, 16, 17, 18, and 19, of Block 1475, and the use made of the land as of June 1, 1923, and theretofore, as well as subsequently. The land was acquired by the plaintiff since June 1, 1923, for the extension of the holder and pumping station located on adjacent land which was being used by the plaintiff.]

The witness continued: Adjacent to Lot 6 of Block 1457 shown on Diagram 10 of Plaintiff's Exhibit No. 258, and

Lots 15, 16, 17, 18, and 19, of Block 1475, shown on Diagram 11, are certain properties used by the Consolidated Gas Company but owned by others. These properties are Lot 17 of Block 1456, on the westerly side of Avenue A between 61st Street and 62nd Street, and Lot 17 of Block 1457 between 62nd Street and 63rd Street and immediately abutting Lot 6, and Lot 1 of Block 1475 at the northeast corner of 62nd Street and Avenue A. I have prepared a diagram in the manner which I have heretofore described in this case which shows this adjacent land, and on this diagram the pink tint indicates the property occupied by the buildings, structures, and apparatus employed by the Consolidated Gas Company in its gas business but located on land belonging to another company, and the blue tint indicates the land which the Consolidated Gas Company owns and uses, and the land indicated in blue tint and the land [fol. 554] indicated in pink tint are used conjunctively.

By the Master:

The Standard Gas Light Company is the owner of those buildings and structures upon the pink tinted land, as well as of the land, and rents them to the Consolidated Gas Company.

By Mr. Ransom:

That is, they are part of what are called jointly used facilities in connection with the distribution system. The superintendence of the plant is under the authority of the Consolidated Company and not the Standard Company. The Standard Company also uses the property as a joint facility. The empolyes there and the superintendent are employes of the Consolidated Gas Company and the operation is operation by and in behalf of the Consolidated Gas Company. The paymeat for the use of the land and equipment owned by The Standard Gas Light Company is made through the joint facilities report.

By the Master:

Referring to the diagram I have just produced, on the lower pink plot between 61st and 62nd Streets, that is, Lot 17 of Block 1456, is a 5,000,000 cubic foot gas holder.

[fol. 555] By Mr. Ransom:

Also on Lot 17 of Block 1457 is another similar 5,000,000 cubic foot holder. On the area shaded in pink and designated as Lot 1 of Block 1475 there are two buildings, a brick and steel governor house and pumping station, and another brick and steel boiler house. This pumping station is connected to the gas mains that control the gas going in and out of all three of the 5,000,000 cubic foot gas holders which I have described and which are located on Block 1457, Lot 6, Block 1457, Lot 17, and Block 1456 Lot 17. The governor house relates to all of those. The lots 15, 16, 17, 18, and 19 of Block 1475 have been acquired for an extension of the plant, which is now being designed, as Lot 1 of Block 1475 is not large enough to permit of the required extension of the governor house and other facilities in connection with these three large holders.

By the Master:

All of the area of the land that is there to the south is occupied now. If you wanted any extension you would have to make it upon some other property. I made the suggestion to the officers myself that they acquire that property. They need additional facilities which are now being designed, and it is the largest holder station we have.

(Diagram of jointly used properties, above referred to offered in evidence and marked Plaintiff's Exhibit No. 264.)

[fol. 556] By Mr. Ransom:

[The witness described the apparatus and buildings located on Lot 1 of Block 1475 forming part of the pumping station. The witness also testified that all the facilities situated on the different parcels of land shown on Plaintiff's Exhibit No. 264 were used as a part of the 62nd Street holder and pumping station of the plaintiff, and were operated essentially as a unit with the three holders, regardless of the ownership.]

[Referring to Diagram 12 of Plaintiff's Exhibit No. 258, the property located on West End Avenue and Amsterdam Avenue between 65th and 66th Streets, the witness de-

scribed the buildings and improvements which were located on Block 1177, Lot 21, and Block 1157, Lot 1, and what use was made of the land and improvements by the plaintiff on June 1, 1923, and subsequently. The improvements on Lot 21, Block 1177, included a building used as the district headquarters of the Department of Mains and Services, a building used as the headquarters of the emergency wagon service in the district, a building used as a meter and fitting shop in that district, a machine shop, and for storing pipe, fittings, valves, and accessories for appliances, [fol. 557] outlying buildings used for the storage of pipe and for cotton waste and oil, numerous storage buildings for the storage of pipe fittings, sheet metal and accessory supplies for the meter shop and the Department of Mains and Services, and yard area for the storage of stock used in the main street work. The improvements on Lot 1 of Block 1157 included two gas storage holders each having a storage capacity of 4,000,000 cubic feet, a gas pumping station, a building for the storage of materials, and a boiler house. The easterly portion of the block has been leased to tenants under leases containing revocable clauses, but it is planned to make extensions of the pumping station and additional holder construction on that area, and the ownership of this portion of the property is held for that purpose. Work is going on for such extension.]

[Referring to Diagram 13 of Plaintiff's Exhibit No. 258, the property on First Avenue between East 98th and East 99th Streets, the witness described the buildings and improvements located on Block 1692, Lot 1, and Block 1670, Lot 1, as of June 1, 1923, and since then, and the use made of the land and buildings and improvements of the plaintiff in its gas business. This is the 99th Street water gas manufacturing plant of the Consolidated Gas Company with a manufacturing capacity of 5,500,000 cubic feet of gas [fol. 558] per day, having four 10-foot water gas generators of the Lowe type, and two storage gas holders each of 600,000 cubic feet capacity, besides other buildings and apparatus. Substantially all of the land in this plot is occupied by building structures and the various pipe connections, and this is a compact and crowded plant. The total oil storage capacity of this plant is about 200,000 gallons,

and the coal storage, exclusive of 1,000 tons kept for immediate use, is about 21,000 tons, of which 20,000 is kept on Block 1692 and 1,000 tons on Block 1670, and some additional coal is kept in storage for this plant at 111th Street.]

[Referring to Diagram 14 of Plaintiff's Exhibit No. 258, the property on Lot No. 11 of Block 1682 is designated as the 111th Street holder station; the property on Lot 18 of Block 1683 is designated as the local headquarters of the Department of Mains and Services; the property on Lot No. 5 of Block 1704, is occupied in part by the transportation department, in part by the Department of Mains and Services, in part for the storage of additional coal for the 99th Street station, and in part by the coal handling plant; the property on Lot 2 of Block 1712 is the bulkhead where coke is unloaded and put in storage and where also the [fol. 559] plaintiff receives deliveries of cast iron pipe and fittings for the Department of Mains and Services. On Lot 11 of Block 1682 there are two gas storage holders each of 5,000,000 cubic foot capacity, and there is a governor house and gas pumping station located on the south side of 11th Street. The witness described the buildings and improvements on the land shown on Diagram 14 of Plaintiff's Exhibit No. 258, and the use made of the land, buildings, and improvements as of June 1, 1923, and since then.]

[Referring to Diagram 15 of Plaintiff's Exhibit No. 258, the property between 114th and 115th Streets and between Lexington Avenue and Third Avenue, which is designated as Commercial Branch No. 6 of the Consolidated Gas Company, the witness described the buildings and improvements on Lot 33 of Block 1642 and the use made of the land, buildings, and improvements as of June 1, 1923, and subsequently.]

[Referring to Diagram 16 of Plaintiff's Exhibit No. 258, the witness described the buildings and improvements located on Lots 1 and 16 of Block 1999, and the use made of the land, buildings, and improvements as of June 1, 1923, and subsequently. Lot 16 was acquired by the plaintiff [fol. 560] after June 1, 1923, in order to secure possession of the brick building located on the southerly end of that lot, that is, on 131st Street, which was used as the head-

quarters of the emergency wagon service in that district, and through which passed the gas mains from the pumping station.]

[Referring to Diagram 17 of Plaintiff's Exhibit No. 258, the property on 159th Street east of St. Nicholas Avenue, used as a meter, fitting, and appliance shop, in connection with Commercial Branch No. 5, which had its offices at 155th Street and Amsterdam Avenue, the witness described the buildings and improvements on the land of Lot 23, Block 2108, and the use made of the land, buildings, and improvements as of June 1, 1923, and subsequently.]

By Mr. Ransom:

Referring to Diagram 18 of Plaintiff's Exhibit No. 258 which is property adjacent to the tracks of the New York Central Railroad, Spuyten Duyvil and Port Morris branch, property located at Exterior and East 157th and 153rd Streets and Cromwell Avenue, that was acquired by the [fol. 561] Consolidated Gas Company, as I recall, February 13, 1923, and improvements are being planned at the present time. As we now have to rent buildings, we are about to build on this land, buildings for the repair of the company's automobiles used in all branches of the company's gas service, that is, all types of vehicles; in part as a garage; and also buildings for the storage of gas ranges, appliances of a bulky character and other supplies and materials which are bulky and bought in large quantities and which are now stored frequently in rented buildings when large consignments have been received. This is to be a large unit for garage purposes and automobile repairs. We have the plans and a large model of the building already completed. The building is to cover substantially this entire site. The land on the railroad side is over a thousand feet in length and by means of side tracks cars will be brought directly into the building for unloading.

By the Master:

The land is not on a grade with the railroad; it is higher than the railroad, enabling us to bring cars into the basement of the building.

By Mr. Ransom:

Referring to Diagram No. 19 of Plaintiff's Exhibit No. 258, that is the Kingsbridge holder and pumping station of the Consolidated Gas Company. The holder on this property is ten million cubic feet and is 251 feet in diameter. The two holders at Astoria are larger, but of those not located in connection with any plant, this is the largest other than Astoria.

There is a large building of brick, steel and general fireproof construction on lot 1 of Block 3236, shown in that diagram 19, which contains three Babcock & Wilcox boilers [fol. 652] together with the piping, boiler feed pumps, feed water heaters and other accessories, and the main portion of the building is occupied by the gas pumping machinery and the gas valves, district governors, pressure indicators, piping, valves of all kinds, all connecting with the holder, with the transfer system and with the distribution system. A substantial part of this property is located on a side hill. The upper and narrow portion is very rugged.

By the Master:

The holder is located on the southerly end. The holder and pumping station might be described as occupying the space up to 480 feet, together with the necessary freeway around them, that is, from West Fordham Road, north of West Fordham Road and clear across to the line indicated by the Harlem River Terrace. Of course, at this point on the easterly side that is very rugged.

By Mr. Ransom:

There Sedgwick Avenue turns around. That is the part which is at the southerly or lower end of the blue tint; the part where the blue tinted area is the widest is the most rugged and steep, and the holder is located in what I might describe as the westerly side of that portion. There have been no changes in the occupancy or use, except the ordinary course of maintenance of the repair of the structures, since June 1, 1925.

[fol. 563] By the Master:

The northern end of the property is of a very rugged character. It is not used. The company would be glad to sell it. It is not useable to anybody. We had to buy it to get the lower portion; they would not sell us this without we took the other.

Referring to diagram 20 of Plaintiffs Exhibit No. 258 the so-called Hunts Point property, located on the East River at Hunts Point Avenue and other streets shown when this land was acquired by the Consolidated Gas Company, dur-
[fol. 564] ing 1923. They began to get the different parcels, within reach, some time back. The three buildings in general that we have now and also the water lines are being used by the construction force. When we acquired the land there were two old houses in a dilapidated condition that I have not mentioned—the old Caswell Mansion and another old house that I guess some of the Caswell family lived in; but I have not regarded those. I am speaking of buildings that we now have down by Hunts Point Avenue, near East Bay Avenue. They are being used by our construction staff. We have built one small building for construction purposes on it. There is a bulkhead along the East River front not yet complete.

By the Master:

The Bronx River is along the upper side of the sheet, the east side of the property.

By Mr. Ransom:

Work has been in progress by my company to improve this land. We have made the preliminary plans and studies and investigations for the construction of the plant and are now receiving proposals from contractors for the construction of the plant. Our own field force is engaged in surveying the property and laying out the reference monuments, and further, in making the necessary test borings for ascertaining the foundation conditions on different portions of the property. The drawings and plans for the manufacturing plant are being made. Proposals are being received or invited for the doing of part of the construction work. The general design consists of a coal storage area,

extending practically the full East River front and along the Bronx River front, with coal handling machinery, unloading machinery, rapid unloaders, machines for storing [fol. 565] the coal and reclaiming it, all of a type similar to that at the Luyster Creek plant at Astoria; and behind that, near Hunts Point Avenue and the East River, would come a joint coal gas plant and water gas plant as a sort of a combined unit.

By the Master:

The capacity of that plant as planned would be about 40,000,000 water gas, and about 15,000,000 coal gas, daily capacity. That plant is planned as being constructed at one time. Extending back from the East River there would be constructed a series of units of manufacturing plants similar to the Astoria plant, which was built as a series of units. You cannot build everything at once, and so the best way to get results is to build them in units. The gas storage holders and the oil tanks will be south of Hunts Point Avenue.

By Mr. Ranson:

These plants, when the plants run into any substantial size, are built in units of so many million cubic feet of daily capacity and what I have stated is the initial layout. There will be one or more holders located at or adjacent to these plants. Plans are being made for one or more of those holders of ten million cubic feet capacity each. The plans of the company contemplate going ahead with the completion of the preparing of the site and the erection of a manufacturing plant upon this property as rapidly as the work can be done in the course of regular construction, and not only that, there is some expectation of having a portion of it in operation in a year, which would be a terrific drive to accomplish that.

By the Master:

All the testimony that I have given relates to the property on both sides of Hunts Point Avenue, in general the [fol. 566] gas storage and oil storage will be west of Hunts Point Avenue. All the gas storage cannot be accom-odated

there, and some of the holders will have to be on the east side of Hunts Point Avenue.

By Mr. Ransom:

I don't mean the area between Hallock Street and Hunts Point Avenue and Farragut Street; that is the west side of Hunts Point Avenue. On the west side there will be located the oil storage tanks and some of the gas holders, of which a number will be required; the remainder of the gas holders will be east of Hunts Point Avenue.

By the Master:

The last unit will be just south of East Bay Avenue, Farragut Street and Hunts Point Avenue will be the location of the office building of the plant. Those streets are actually opened there. I would not say the streets are regulated and graded, but they are in fairly good shape. They have not been paved; they have been filled and I guess rolled with a steam roller.

By Mr. Ransom:

Referring to Diagram 21 of Plaintiff's Exhibit No. 258, the land owned by the Astoria Light, Heat & Power Company in Blocks 849, 850, 859, 860, 871, 881, 882, 893, 894 and 895 comprises the Astoria manufacturing plant, coal gas and water gas, and pertinent equipment, and did as of June 1, 1923. In general there are two coal gas units known as Plant A and Plant B, each having a daily manufacturing capacity of twenty million cubic feet, the plant known as Plant A is located on the westerly side of it, about at the dotted line vertically on the sheet, the long broken line near the left of the sheet, just to the left of where the dimension 1,000 appears. The westerly side of the A Plant is about on that line. First, just south of the north shore [fol. 567] bulkhead is a coal storage area where the gas coal is put in stock, and along the bulkhead there are operated two rapid unloaders for unloading the coal brought to the bulkhead in barges. Then the buildings of the coal gas plant extend along in a series down to a distance of about 500 feet north of Winthrop Avenue; and then south of the buildings are the large fifteen million cubic foot

holders. The four plants now constructed, A. B. C and D, extend from left to right in their location on the sheet.

By the Master:

C and D are water gas plants. A and B are coal gas plants. Plant A, has retorts of the inclined system. Plant B has retorts of the horizontal system; Plant C has water gas generators of the Lowe type. To the south of the retort houses and generator houses are the usual building-necessary for the exhausters, boiler houses, purifying houses, condenser houses, tar extractors, laboratories and other equipment in very numerous detail. Along Luyster Creek and the north shore bulkhead to the west of Luyster Creek is the Luyster Creek coal storage plant, where there is a storage capacity of from four hundred to five hundred thousand tons. We could put hard coal there, but at the present time there is only soft coal. It is all bituminous. Of course we can put any kind of coal there as necessity may require. Over in the area where it says Block 850, at just about the center of the map, there are several hundred thousand tons of anthracite coal; also over toward the East River there is more anthracite coal in stock. It [fol. 568] would be in a case of necessity, if we took coal from the Astoria plant to another plant. It has been done and it might be done again as necessity might require it, but it is not used as a general stock storage for the system, outside of the Astoria plant itself. If would mean rehandling. Of course, we have taken coal from there, both anthracite and bituminous and we may have to do it again but the responsibility of maintaining service is very great. There is no coal there that we call Central Union coal or coal that we call 21st Street coal and there is no coal that is maintained there which is in the ordinary course sent to or distributed among other companies.

By Mr. Ransom:

[The witness described further in detail the buildings and improvements located at the Astoria Plant and the use made of the land, buildings, and improvements as of June 1, 1923, and since then. There was also a rectangular parcel of land on Lot 2 of Block 850, which is owned by

the East River Gas Company of Long Island City, on which is located the tunnel shaft of the Astoria tunnel of the East River Gas Company extending over to 132nd Street and Locust Avenue, in The Bronx. The strips extended from the square shown on the diagram are easements acquired by the East River Gas Company for the tunnel shaft and the gas mains running from the tunnel.

[fol. 569] [Water gas plant C in general consists of about 12 generators of the Williamson type. Plant D comprises 12 generators of the Lowe type. Both of the generator houses are equipped with high pressure blasts for the generators, and Plant D is equipped with traveling weighing lorries for charging the coal into the generators and also with the Kennedy automatic mechanism by means of which one operator may supervise the operation of several machines. The Williamson machines in the C house are hydraulicly operated with manual operation. The coal handling equipment at Luyster Creek consists at the present time of two electrically operated coal storage and coal unloading bridges which travel along the Luyster Creek front with a turntable permitting the control of the reclaiming of coal over a very large area of ground. The facilities at Luyster Creek permit the receiving of coal in ocean-going vessels, the depth there being 26 to 28 feet, the dredging of the additional depth having been accomplished in 1922. A large part of the bituminous coal and anthracite coal is received at the north shore bulkhead, where the depth is not sufficient for an ocean going vessel, being not over 18 feet and having a rock bottom. Upon the property comprising the Astoria plant there are two complete steam railroad systems. There are two gas storage holders on the property each having a capacity of 15,000,000 cubic feet or a total storage capacity of 30,000,000 cubic feet. Since June 1, 1923, work has been done and substantial changes or improvements have been made upon the property. There is construction work going on there all the time.]

[fol. 570] The Consolidated Gas Company owns property located between West 123rd and West 124th Streets and uses and operates property on Lot 37 of Block 1978 owned by the Standard Gas Light Company but rented from them. This is located west of Amsterdam avenue on the south side of 124th street. There is there what

is known as the 124th Street store house in which there is carried in stock a large quantity of gas ranges, gas heaters and lighting devices of the Commercial Department, and supplies of that kind. The building is two stories high and every available foot of space is occupied with stock of that kind. I have prepared a true and correct diagram of that block.

(Diagram offered in evidence and marked Plaintiff's Exhibit 265.)

With respect to all of the properties that are owned by the Consolidated Gas Company or by others which I have described and which are in use and covered by my diagram put in evidence, as to which I did not state specifically that there had been a change in ownership or use of the properties of the plaintiff company, the ownership and the use of such properties substantially in the manner described by me has continued since June 1, 1923, as specified. There have been some slight shifts in the occupancies of the general office building since that time, but they are taken care of concurrently and contemporaneously by adjustment of the rentals charged to different tenants. The schedule of June 1, 1923, shows the occupancy as of that date.

That is true both as to the statistical statement, Exhibit 263, and the graphic diagram which is Exhibit 262.

[fol. 571] New York, March 3, 1925.

Met pursuant to adjournment.

It is noted that a view of the Astoria plant, 61st Street holder station, 99th Street, 21st Street and 11th Street plants was taken on Friday, March 7, 1924, by the Master, counsel and plaintiff's and defendants' engineers.

Herbert W. Alrich, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination by Mr. Donnelly:

On my direct examination I testified, that I inspected all of the gas plants of the Consolidated Gas Company and its affiliated Gas companies for the purpose of keeping them

in repair and of improving and extending them. This would go back about fifteen years; I cannot mention definitely any year in which such duties began with me. The [fol. 572] minor repairs at a station are in the hands of the superintendent of the particular station; that is his obligation. My present duties are to have immediate charge, as I testified, of all construction and major repair work at all of these plants, buildings and properties. I would make an inspection at a plant and make the major repairs as a result of the authority of my superior, W. Cullen Morris, who is chief engineer and engineer of construction. Mr. Woods is his immediate superior. The desirability and necessity of such major repairs in many cases I brought to the attention of my superiors. Mr. W. Cullen Morris also made recommendations in connection with the gas companies affiliated with the Consolidated. James F. Hunter is the other assistant engineer of construction and at the present time he is devoting a large part of his effort to the New Hunt's Point plant. He has been with the Consolidated Gas Company since the spring of 1904 and makes the studies as to the future development of the manufacturing capacity and holder stations, the pumping equipment that will be needed in the future, it requiring study in advance of these problems. He participates in the designing of the work done along with myself and negotiates with contractors in the purchase of engines, boilers, exhausters, pumps, machinery of that type, and in general participates in the departmental work, and performs for the gas companies affiliated with the Consolidated Gas Company work of the same general character.

[fol. 573] As to the Standard Gas Light Company at 115th Street, since January 1, 1922, we have made extensive repairs to the purifier boxes in the northerly purifier house. We have reconstructed one of the tar separators, made extensive repairs to one of the two gas oil storage tanks; repaired the covers of the purifiers in the southerly house, installed a new exhauster Buck-eye engine for driving; did extensive repair work to the relief holder at that station; tore out three Babcock & Wilcox boilers and two steel smoke-stacks connected to them and are now installing two new Babcock & Wilcox boilers, together with a brick chimney. We have installed a new multi-tubuler condenser and

several steam pumps for various purposes, which is all of the work which occurs to me at this moment without a memorandum before me. These repairs were made by the construction department of the Consolidated Gas Company, in so far as the work was not done by contractors after competitive bidding. On all contract work there are certain parts of it that are done by the construction department of the Consolidated Gas Company and charged against the particular affiliated company. Some of these repairs were made by individuals or concerns other than Consolidated Gas Company or the Standard Gas Light Company such as contractors, on competitive bids.

[fol. 574] The construction work or repair work is always, if possible, awarded as a result of competitive bids, for we are required to get competitive bids, but sometimes we have the experience that those we ask to submit bids decline. If I was going to do a job that would cost only $100, I should feel under the responsibility to get competitive bids. The same procedure is followed by the Consolidated Gas Company and its affiliated gas companies.

At the plant of the Standard Gas Light Company, the new tar separator was built by Davis & Farnam of Waltham, Massachusetts, who received the award for competitive bidding as against some three or four other concerns. The repairs in and to the purifier house equipment and the repairs to the relief holder were made by the Bartlett-Hayward Company. That Company originally built the holder. The new exhauster was installed by the Connersville Blower Company, they having had a lower bid than the Roots Company, a competitive bidder. The pumps were purchased from various pump manufacturers and installed by ourselves; the new boilers which are being installed—if I recall I said they were Babcock & Wilcox boilers. If I did, that is in error. It ought to be Springfield boilers, the Springfield proposition having been lower than that of the Babcock & Wilcox Company; the brick stack, the competitive bid was awarded, as I now recall to M. W. Kellogg; the steel piles for the foundation of the [fol. 575] brick stack are to be driven by the MacArthur Concrete Pile & Foundation Company of New York City. I think that covers it, except that the repairs to the north

purifier house building, were made by Richard Deeves & Son.

The work of the repairs to the purifiers and to the relief holder, that I have just described, was done by the Bartlett-Hayward Company. All of that apparatus was apparatus that had been built by them originally, and they had the drawings. That was not done by competitive bidding on those particular jobs.

At the Port Morris Plant of the Central Union Gas Company, all of the construction and repair jobs performed, as I recall without a memorandum before me, since January 1, 1922, are as follows: We had made repairs to the building structure of the inclined retort house and also extensive repairs to the inclined retort benches; made some extensive repairs to the horizontal retorts at that plant; built a new elevator tower between the horizontal retort house and the water gas generator house and installed therein a steam hydraulic elevator, together with bridges connecting both to the retort house and to the generator house; provided the narrow gauge track and switches and turn-tables by means of which the hot coke can be taken from the retort houses and taken into the generator house to charge into the water gas machines; installed a new engine and exhauster in what is known as the mixed-gas exhauster house; [fol. 576] a No. 14 Sturtevant blower, driven by a Buckeye horizontal engine for furnishing additional blast for the water gas generators, and installed numerous pumps, supplied by different manufacturers and erected by the Construction Department.

Those repairs I have just described were made by contractors, as the result of competitive bidding. The contractor on the retort benches, was the Improvement Equipment Company.

The directors or other executive officers of the particular company authorized the awarding of the contract and designated the one who received the bids. They act, of course, largely upon the recommendation of Mr. George E. Woods and Mr. W. Cullen Morris.

They make recommendations as to who the successful bidder will be.

[fol. 577] As to the Astoria Plant, there has been a tremendous amount of work there since January 1, 1922. I had the same connection with that work as any other work

that I have described. Since January 1, 1922, a number of improvements have been made to the Astoria Works. Whether this work was initiated by me would be very hard for me to answer without a list of all of the work done there in that time before me. That would be quite a list. And then the question as to who initiated those things is just about as definite as to who first discovered America. Some new coal storage has been established at Astoria since January 1, 1922 and we have reclaimed the lands over at Luyster Creek. The new coal storage at Astoria was not initiated by me. I am familiar with the new bridge or overhead structure which is being constructed in the vicinity of Luyster Creek and it was not initiated by me. Neither was the new bulkhead at Luyster Creek, which has been constructed since January 1, 1922 initiated by me. Since the first of the year, my salary which I am paid by the Consolidated Gas Company has been $8,500. I do not make written reports on the distribution of my time. The matter comes up for consideration from time to time. It has been discussed with Mr. Morris, with Mr. Carter, and Mr. Brundage. I have been in discussions with all of them about it I think in that time. My time is apportioned to those other companies (the affiliated companies). My salary I mean to say is. I don't know the apportionment, it is made by the accounting officer on the dollars that the [fol. 578] books show, based upon the cost of the work done for the several companies. I know the method but I don't know what it amounts to. I believe that the accounting officers should testify to the method of apportionment. It is apportioned on the dollar basis of the work done for the different companies. It would fluctuate from time to time. Whatever fluctuation does occur is reflected in the apportionment. I have discussed with my superiors the way in which my time has been devoted since January 1, 1922. They follow the rule of having something very definite of the way in which our time is occupied, and I know they have been satisfying themselves of the correctness of the method of apportionment. I have memoranda that would aid my memory very largely in making an apportionment but I did not make any memorandum directly for that purpose.

[fol. 579] New York, March 11, 1924.

Met pursuant to adjournment.

HERBERT W. ALRICH, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination continued by Mr. Donnelly:

Referring to the 14th Street plant, there are two gas holders on the plant now—one of 3,300,000 cubic feet built formerly by the Continental Iron Works and in 1921 rebuilt by the Bartlett-Hayward Company; and the other 5,000,000 cubic feet built by the Bartlett-Hayward Company, this latter comprising what is known as the 15th Street holder station. The holders were used in connection with the gas manufactured at the 14th Street plant. At the time the plant was retired those were all of the gas holders that were at the plant. The gas holders are there physically and in use this minute, on 15th Street. They are receiving gas from the line that connects with the 21st Street and the 11th Street works, and sending it out to consumers. Those gas holders had been formerly used for the reception of gas that was manufactured at the 14th Street plant. I think it was about 1919 when they last physically received gas from the 14th Street station.

By the Master:

I would not say that the holders connect directly with the transfer main; they connect with the 21st Street and the 11th Street Stations.

By Mr. Donnelly:

The 15th Street holder, which is the 5,000,000 cubic feet holder, was begun in the spring of 1905 and completed in 1906. The 3,300,000 cubic foot holder was originally built before my employment with the company and rebuilt in 1921.

In regard to the 14th Street plant, between the retort house and the coal shed there were wooden tanks for the accumulation of the tar and ammonia. They were in use same as the rest of the plant prior to October 31, 1923. I am [fol. 580] under the impression that they contained some tar

and ammonia up to the retirement of the plant. I do not mean that down to October 31, 1923, coal gas was manufactured at the 14th Street plant, but the plant had been kept prepared for service at any time. My best recollection is no coal gas had been manufactured at the 14th Street plant subsequent to 1918 and 1919.

Along the westerly end of the block were brick buildings extending from 14th street to 15th street; at the corner of 14th street was a two-story brick building for the headquarters of the superintendent and the clerical staff, which was used for that purpose down to October 31, 1923; there were activities requiring such a staff or force, such as the operation of the holder station at 15th street and repair work that was carried on, as I have already described, in the buildings adjacent to the office building. Arthur R. Ritchie was the superintendent of the 14th street plant to October 31, 1923; as I recall it, he had two men on the clerical staff of the works down to that date, who performed the services I have indicated. Mr. Ritchie had other duties than merely in connection with this plant, and his chief clerk Stevens gave considerable attention to supervisory duties in Mr. Ritchie's absence. Mr. Ritchie is now employed as assistant superintendent at the 21st street station of the Consolidated Gas Company and has his office there. I do not just recall the date when he located himself at that place, but for several years back he has been assisting Mr. Barlow at the 21st street station, in addition to looking after the 14th street station. Mr. Stevens is at the 14th street station [fol. 581] holder now in the operating department, but as to where the other clerk is I do not know.

The 21st street plan is a water gas plant with a daily capacity of 38,000,000 cubic feet. The 9,500,000 cubic feet daily capacity of the 14th street and 42d street had been replaced by an addition at 21st street.

With the retirement of the 14th street and the 42d street stations there was no longer coal gas manufacture in progress in the Borough of Manhattan; that is the fact now, and has been the fact since they were discontinued from service.

Coal gas and water gas are made at the plant of the Central Union works. I do not know in what proportions they turned out coal and water gas at the Central Union. As to

the maximum capacity of coal gas, that plant is rated at 3,800,000 cubic feet of coal gas per day and I don't know how Mr. Woods rates it, but I should say about 8,000,000 cubic feet of water gas per day. At the Central Union works they have the Lowe process of water gas machines—one ten-foot, one eleven-foot and one twelve-foot machines; the ten-foot machine would rate about 1,500,000 cubic feet per day; the eleven-foot machine would rate 2,000,000 cubic feet per day and the twelve-foot machine would rate 2,500,000 cubic feet per day. That is my offhand estimate and is [fol. 582] not intended to commit Mr. Woods.

I am in touch with these plants very frequently and incidentally observe the course of manufacture at each of the manufacturing plants. There might be occasion for me to note it very carefully in connection with some projects, but in general that belongs to Mr. Carter, Jr. Suggestions as to improvements in process would emanate from the operating department or Mr. Morris or Mr. Woods, and I would have to do with the development of the project; it is part of my duty to recommend improvements at the various manufacturing plants of the Consolidated and its system of gas companies, having to do with physical maintenance.

Referring to Block 991, Lot 1 (Pltf's Ex. 258), I stated that lot was used for the storage of any kind of coal and that it would accommodate about 30,000 tons of coal, and that there were about 12,000 tons there at the time of the sale of the parcel, 14th Street station, on October 30, 1923. It was used for storage purposes down to the time of the sale. I cannot say how recently prior to the time of the sale I had seen the lot because I would frequently be in that vicinity, going to the 11th street works and this station. During the construction of the tunnels under the East River to the Eastern District of Brooklyn the Public Service Commission had required us to allow Booth & Finn to use the property, and their occupancy terminated prior to 1922. From January 1, 1922, down to October 30, 1923, no other use of the property had been made than for coal storage purposes.

Referring to the two-story brick building it was about 20 feet wide on 15th Street and about 30 feet long on Avenue D—my answer being made without any memoranda before [fol. 583] me. I do not know when it was put there. It was used for no other purpose than for the men watching the

coal. At the time I was giving the description of the buildings and other improvements that were at the 14th Street plant, on my direct examination, I had before me a large blueprint that I consulted. That blueprint gives the length of the building on Avenue D and 15th Street as 25 feet, and some other general dimensions of the buildings.

Referring to Lot 1, Block 989, on which there is a brick and steel governor house, I should say, in a general way, that most of the gas pumped at that location came from the 21st Street station; it could come from the 11th Street station. Mr. Woods might be able to make a better statement than I as to what particular manufacturing plant or station the gas that was pumped there came from.

The plant of the New Amsterdam Gas Company that was in the Borough of Manhattan has been out of business and discontinued making gas for about 21 or 22 years. It occupied the site where the waterside station of the New York Edison Company is now located, East of First Avenue, on the East River, south of 42nd Street. Only water gas was made there.

[fol. 584] Speaking of the meter shop and the fitting department, as to whether Mr. Turner, who is in charge of the meter shop or Mr. Murray, his assistant, or both perform services for the gas companies affiliated with the Consolidated as well as for the Consolidated itself, the other companies have their own similar officials. The arrears and claims department of the Consolidated Company performs servicesfor the gas companies affiliated with the Consolidated, for which they are charged. Mr. Henry E. Almberg has charge of the arrears and claims department. [fol. 585] That is just one department, the arrears and claims department. The nature of the arrears handled by that department is unpaid gas bills, and consumers who may have bought a gas range or other appliance on the partial payment plan and have fallen sadly into arrears. You might have to replevin the goods. That is their activities. The nature of the claims handled by that department covers arrears. They handle the adjustment of claims under the Workmen's Compensation Law and matters of that kind. I don't know how many employees under the head of that department. Mr. Stillwell is in charge of the automobile and transportation department and occupies 2 rooms in

this general office building,—one his own office and the other his office staff. I don't know the size of the staff that works under Mr. Stillwell, who is the head of the transportation department, and who occupy rooms in that building. His clerical staff, stenographer and clerk and so on. As to whether that transportation department of which Mr. Stillwell is the head performs services for the gas companies affiliated with the Consolidated, I have no knowledge of such services. The auditorium in the general office building is used for various meetings, stockholders' meetings, stockholders of the Consolidated Gas Company, we hold engineering meetings there, lectures, instruction classes and other activities of that kind and character. [fol. 586] Only our own company hold meetings there. I am a member of several engineering societies. Only the Society of Gas Engineering of New York which consists exclusively of employees of the Consolidated Gas Company and its gas companies holds meetings there. The Auditorium is not used for the meetings of stockholders and any of the tenants of the building. It is not used for the meetings of stockholders of any of the affiliated gas companies of the Consolidated, nor for the purpose of stockholders' meetings of the electric light companies in that building. I don't know all the meetings the stockholders have. I see the announcements—I don't count them.

These lectures which I spoke about for which the Auditorium is used are technical lectures relating to the business for the instruction of the company's technical staff or bookkeeping staff. There are different departmental staffs. They may have lectures on salesmanship. I don't know how frequently those lectures are held, but they have had them, either in the evening or day-time. I have attended them, but not all of them. I think in general that covers a description of the use of the Auditorium. I have not indicated the amount of floor space occupied by the Auditorium, it is about 40 feet wide, by 74 feet deep. In a general way I have it in mind. I laid the whole think out. Two stories. There is a balcony in the rear of the room and it goes a little above the level of the fourteenth floor of the [fol. 587] building. The main floor of the Auditorium is on the thirteenth floor and the south end of that there is a platform. The accounting department are located on the

sixteenth floor but they have some of their staff on the seventeenth floor. The fifteenth floor is occupied exclusively by the New York Edison Company. The accounting department of the Consolidated does not perform any services for its affiliated gas companies. As to whether the payroll department performs any service for any of the gas companies affiliated with the Consolidated, after they have made up the payroll of the Consolidated Gas Company's employees, they use their spare time in making up the payroll of the Astoria Light, Heat & Power Company, for which the Astoria Company is charged. It pays one-sixth of the cost.

In the various parts of the general office building which are rented to tenants, the spaces so rented are covered by written leases. Back in the beginning I recall having had some connection with those leases. That has not continued since the beginning. I do not fix the rent nor define the terms of the leases.

[fol. 588] New York, March 14, 1924.

Herbert W. Aldrich, a witness in behalf of the plaintiff resumed the stand.

Cross-examination continued by Mr. Donnelly:

Referring to the Hunts Point tract, it is contemplated to erect upon all of that tract and upon the manufacturing part of the plants themselves, coal and water gas plants. The first unit will be about forty million water gas and about fifteen million coal gas. Now, I am not able to say whether the remaining units will come in the same balance. The contracts for the manufacturing plants, the coal gas and water gas have not yet been let; we are getting figures now. We have some of them already. The contracts for the erection of the plants are in process of negotiation, but I do not know all of the parties with whom the officers of the company are negotiating. Bids have been invited, and some of the bids have been in for some time; they are not yet all in. I do not know the type of foundation for the buildings of the coal gas plant to be erected there, for the buildings. Within a few months we began to locate upon

the property the general lines of those buildings, so we could make the core boring at those points. Those first buildings would come relatively near the East River front. The character of the foundations for those first buildings has not yet been determined. I could not say how many buildings will comprise the coal gas plant without the plan before me. It would be, in the main, a retort house, an exhauster house. The boiler house will be a joint building; a condenser house, the purifiers and other accessory buildings and structures of that character.

[fol. 589] For the reception of the water gas manufacturing equipment alone there would be erected about eight buildings. I state that without any memorandum before me—and then, of course, there would be some buildings of a general character. The character of the foundations for those buildings has not yet been determined; we are proceeding to get that information.

There would be in this first unit, one retort house. The building as laid out would accommodate any one of three different types of the retort proposed to use in the coal gas plant, and as to which proposition the officers of the company are most likely to accept, I cannot say.

The type of water gas generators that will be used in the water gas plant will be three shell machines of the Lowe type with a capacity of twelve-foot generators, hydraulically operated, built to manufacture about four and a half million feet per day per machine. The capacity per day is forty million for water gas and about fifteen million for coal gas. It is contemplated to equip those water gas sets with waste heat boilers and automatic controls. Some with waste heat boilers and some with automatic controls, there being a point where too lavish application of those principles may not be economic. I am in on the conferences with reference to the design, but the question of capacity is [fol. 590] a matter that is settled by the higher officers of the company, including Mr. Woods and Mr. Morris.

The plan contemplates a group of oil tanks to the West of Hunts Point Avenue, and quite a series of those oil tanks which will be built as we proceed. We will start with two of them, each 2,000,000 gallons capacity. It is contemplated to increase the number. In other words, it is definitely settled, when the plant begins operations that we will have

an oil storage capacity of some definite figures; we must have the oil as we must have the coal and other materials. The contemplated oil storage capacity at the Hunts Point tract, will not start with less than 4,000,000. It is a question of how many of those oil tanks they place in the first contract, but my present judgment is it will be about two to start. The contemplated coal storage capacity to be installed there, is a matter of which I am not yet informed, as to what Mr. Addicks or Mr. Woods intend to do—how far they will go with coal storage. There are several thoughts that are being considered there.

My personal judgment is—I am not undertaking to pretend to know all of their thoughts on the matter—that there will be one 10,000,000 cubic foot holder to start. When I testify that I am not able to say what their thoughts are in the matter, it is not exactly that the matter is not yet definitely settled as to just what size this plant will be—what [fol. 591] the number of holders on it will be, what the capacity of the various equipment and manufacture, and so forth, will be. Here is a large plant of a large gas works. Obviously we cannot construct it all at once. The problem is to construct at the start that portion which will produce the best and the quickest results and make it an operating plant to start. Now, if we undertake to do too much at once, it would extend the period of construction before the plant would be usable. Those things that I speak about are all matters to be left to the determination of Mr. Woods and Mr. Addicks, and properly lie in the determination of the higher officials of the comapny. I do not know whether the contracts for the coal gas house and the water gas house and the other equipment that are accessory to both those plants have yet been ordered.

I described in my testimony several days ago that the coal gas and manufacturing plant was located just east of Hunts Point Road, several hundred feet back from the East River, running in general parallel to the bulkhead along the East River. The retort house will lie next to the coal and the generator house back here. (Indicating on map.) The other units will extend back in a line that would be approximately parallel to Hunts Point Avenue. All of the plans have not been drawn, only some of them have been drawn, for the buildings. I mean general plans—not de-

tails yet. That is a big job. The plans for the buildings in the first unit, were not drawn by me, but under my super- [fol. 592] vision. Mr. Hunter, Mr. Morris, Mr. Woods and Mr. Addicks have been giving a great deal of attention to this. During the progress of the drawing of the plans I was in consultation with those gentlemen, occasionally; more frequently with Mr. Morris and Mr. Hunter than others.

After all these buildings and accessories and so on that go with the equipment shall have been installed, there will not be considerable vacant land space there. It covers every square foot of the ground. It is contemplated to use a part of the tract for the storage of materials other than oil and coal, and the usual materials required around a gas works, such as firebrick and refractory materials. Those have to be bought at a favorable time in the market, and that represents a considerable expenditure, that is materials used in connection with repairs around the plant. It requires a very considerable part of refractory material for either coal gas or water gas. No storage area for pipe and other materials used by the Department of Mains and Services. Is a part of the Hunts Point plant. I say that without intending to convey the idea that, if we had a large main laying job up in the Bronx and bought thousands of tons of large cast iron pipe, we might find it convenient meanwhile to bring it to this bulkhead and unload it there and truck it up to Hunts Point Avenue, but that is no part of the permanent plan. The property is separated by a street known as Hunt's Point Avenue and part of the tract [fol. 593] lies between Hallack Street, Hunts Point Avenue and Farragut Street. There will be oil storage and two gas holders there. I do not know whether these plans which have been drawn contemplate a connection between this plant and the plant of the Bronx Gas & Electric Company.

Since June 1, 1923, the major repairs at the various properties, beyond the ordinary repairs are as follows: At the 11th Street works the repairs to the piers and bulkheads. Repairs to the coal handling equipment at the bulkhead other than the extensions to which I have referred. Repairs to some of the underground piping around the works. I am referring now to repairs out of the ordinary and in

undertaking to give them I am stating them without any memorandum. At the 17th Street headquarters of the Department of Mains and Services there have been reconstructed the fences enclosing the property. At the 21st Street station new roofs have been put on the buildings in Block 979, the total extent of the work comprising many thousands of square feet of new roofing. We have made [fol. 594] extensive repairs to two of the multi tubular salt water condensers and we have reconstructed the fences around the easterly end of Block 979——

By the Master:

I have given, on the direct examination and cross-examination the large part of the major repairs that were made to these plants during the period referred to by Mr. Donnelly either under the form of replacements or additions or renewals, whatever the term may have been used. I was testifying then without a memorandum, and if I went over it two or three times, this is a very large volume of work, as I went over each item there might another repair project occur to me. I am testifying without a memorandum.

By Mr. Donnelly:

I have testified to certain additions, improvements and changes which have been made to the various properties since June 1, 1923, and I included in my description some major repairs.

I gave the important changes that had occurred in the properties no matter how the project first began. It might have been begun as a major repair and actually been carried out as a replacement. Some of the fencing I have referred to as an illustration of major repairs to the fences around Block 1157, was authorized by the officers of the company, and when we came to carry out the work the most advantageous way to do it was replace the fence. Regarding the replacement of a wooden fence with a woven wire fence, in our accounting we would withdraw the old fence and charge the new fence so that that would become a replacement under the uniform classification, and not a repair even though that project might have been started [fol. 595] under an order to repair the fence. I had immedi-

ate charge of all major repairs made at these premises. I have given what major repairs were made at the various properties of the plaintiff company since June 1, 1923, very largely testifying without a memorandum. In my testimony in the week I have been here on the witness chair I have testified as to all kinds of changes, be they extensions, replacements, improvements or major repairs. In other words, they were given without a memorandum and I may have omitted some. I would define major repairs of which I have charge, as that maintenance of the company's plant and property that would be beyond the regular routine of a plant superintendent's duty. To illustrate, the plant superintendent would maintain the valves on a steam pump and packing and accessories, everything of that kind he would maintain, but if it came to the larger problem of having the cylinders bored and relined, that would come to me, because that is not a part of the regular daily works maintenance routine. There have been such major repairs made to the properties including the buildings, structure and equipment of the plaintiff since June 1, 1923; it is going on all the time. I cannot tell you what the cost of those socalled major repairs has been since June 1, 1923. I have not the company's books of account with me so I cannot answer. Every penny is there.

The so-called major repairs that I have been speaking about include such repairs to the buildings, structures and equipment of the Astoria plant. I have immediate charge of those likewise. I will tell you what major repairs have [fol. 596] been made at the Astoria plant since June 1, 1923. Since June 1, 1923, we have made extensive repairs at the Astoria plant to the tracks and supporting structure for the rapid unloaders on the north shore bulkhead to which I have referred already in my other testimony in addition to reconstruction of the rapid unloaders themselves. We have made repairs to the underground piping at the Astoria plant, to the water gas generators in the C generator house, that is to say, the Williamson generators. We have put in a new roof on the C generator house. The line between major repairs and minor repairs, at the Astoria plant is drawn somewhat higher up than at the other stations for the reason that they have a very large machine shop

of their own which enables them to do some more extensive work outside of my jurisdiction than occurs at the other stations. There was a tremendous amount of work going on there all the time, of major repairs, it being the fact that at the plant there is larger work than at the other stations. It does not come within the purview of my duties.

Speaking of the repairs at the plant of the Consolidated and at the Astoria plant most of those major repairs that I have described were recommended by me. Before the so-called major repairs were made, I submitted estimates mostly in writing, of the cost thereof to Mr. W. Cullen Morris and some cases possibly not.

[fol. 597] Referring to the new construction work done at the properties of the Consolidated Gas Company since January 1, 1922. I made written reports of my estimate of the cost of those improvements to Mr. W. Cullen Morris, I should say every single one of them, together with, in most cases, competitive bids. In the others the competitive bids were obtained later, but we usually, in addition to the estimates that we have made, provide him with competitive figures. I testified on page 189 of the mimeograph record, referring to the 11th Street plant, in Manhattan Borough, that there is a brick building south of the condenser house containing four blowers driven by horizontal engines. It is not a fact that horizontal engines connected to blowers are obsolete. I have never recommended that these horizontal engines be withdrawn and be replaced by the installation of blowing apparatus with turbine driven engines. We have just installed a unit like that at the Central Union works in the last year, just like the one you asked me about at the 11th Street station.

[fol. 598] Whether blowing apparatus is now being installed with turbine driven engines is simply dependent upon the adaptability to the situation. We have just installed, in the last year at the Central Union Works, a blowing unit just like this one at the 11th Street plant that you are talking about. By the adaptability to the situation I mean many factors enter into that, one of which is the quantity of steam available and the disposal of the exhaust steam from the turbine. The turbine driven engine is not superior in efficiency to the horizontal engines, unless there

be some disposal or employment or use for the exhaust steam after it goes through the turbine. Those are not the only circumstances under which the turbine engine would be installed. It comes down to other factors. This installation of steam turbines in a gas plant is a rather complicated question. We have installed two-state centrifugal blowers with turbine motors at suitable locations. We have just installed two at 21st Street, but we are just installing a single stage type at 99th Street. Those did not take the place of any others that had been there before. They are additional.

The blast pressure developed on these horizontal engine blowers when they were first installed at the 11th Street station is just the same as we get now. We maintain the machinery so that we get the same now as we did then—30 inches. So that the blast pressure has not been increased or reduced since they were first installed. The Consolidated Gas Company does not, to any knowledge of mine, contemplate withdrawing those horizontal engines from service at the 11th Street works.

[fol. 599] I have not made any such recommendation. I know there have been no discussions of it that I have heard, and we have just rebuilt one of the engines in the past year, with the same kind of equipment. Automatic controls permit the timing of the machine in any cycle that may be desired. The blow may be prolonged or shortened—the run may be prolonged or shortened—and the blow operation of the machine may be controlled in any desired cycle, to a second. It may not be desirable to accomplish the shortening of the blow. It depends exactly on what state of the day it is when the cleaning and cooling period takes place. During some part of the day, it would be desirable to reduce it and during some other part of the day it is desirable to prolong it. The fact is this: That when a machine has been cleaned and cooled, it requires a prolongation of the blow and, with a machine cleaned and fresh fire, the run could be longer and lower. The automatic control reduces the time of the run and of the blow by the readjustment of the automatic by the supervisor. It does not do the thinking itself. As to whether the automatic controls reduce the amount of the labor and increase the

efficiency of the oil, that is a thing yet to be shown. There is no uniform history back of automatic controls for a man to pretend to give any statistical data about it. That is, to the best of my knowledge. As to how long the automatic control has been in operation at the Astoria plant, I do not recall exactly or when that was first operated. Of course, we have conducted experiments for several years [fol. 600] with all the different makes of control, some of which are beautifully advertised. I think it was about September, 1923, that we first ran the automatics at the D plant at Astoria. We experimented with the installation of automatic controls for several years at the Ravenswood works. They have been in use there at Ravenswood for about two or three years. I do not think that I have got the last word on automatic controls, any more than we have on any mechanical device. I have not recommended the use of automatic controls at the 11th Street plant or at the Astoria plant. They are already at the Astoria plant in the D plant. I do not know of any additional ones contemplated to be installed there. I know the automatic controls are used at some of the gas plants of the Brooklyn Union Gas Company. I do not know if that is true of the Kings County Lighting Company.

It is true that every water gas set at the Astoria plant is equipped so it may operate in conjunction with a waste heat boiler. That is in the operation of a gas plant, varying circumstances require a modification of the equipment used and just over what periods of time economy may be reflected by the operation of the machine without the waste heat boiler I am not prepared to say. "Requires a modification of the equipment used" means a modification of the use of the equipment. Here we have a certain piece of equipment which is capable of certain use. I do not mean to be understood that it is necessary to change the character of the use of that particular piece of equipment. I mean, in the best operation of a plant, to meet certain conditions the superintendent may find it desirable to by-pass a piece of equipment, and all equipment in a gas works is so [fol. 601] arranged that it may be by-passed, if desirable. Every piece of apparatus is so arranged that it may be by-passed if desirable. I do not mean, temporarily allowed

to go out of commission. Operating conditions may arise which may make it desirable—the best results under those conditions may be reached by by-passing some piece or pieces of the apparatus; not because it is not capable of use; a number of different conditions may arise. It may not be desirable to use it, under some condition existing for a period.

I am not familiar with the details of the improvement work of the Brooklyn Union Gas Company, but I know they are very progressive. I have visited some of the Brooklyn Union Gas Company's plants, but not within a couple of years. I do not know that the Kings County Lighting Company, in remodeling its plants, has put in waste heat boilers, and automatic stokers. That is because I have not visited that plant in several years. As to whether the water gas sets at the 11th Street plant are so located that they could be provided with waste heat boilers and with automatic stokers, from an engineering standpoint, you can do anything. I should say that there was not a water gas plant in the world that you could not put waste heat boilers on. That does not apply specifically to the 11th Street plant. I should say that that is just a consideration of economy. [fol. 602] I believe, if our study of the question had shown it would be economical for the addition of waste heat boilers, it would be done at the 11th Street station. It is physically possible to equip the water gas sets.

Those water gas sets are so located and designed that they can be remodeled to make gas by what is known as the back-run system; you could put the system on any machine. I have investigated this new operating cycle of making water gas. It is called new, and a lot of them that have been installed in other cities are not in use. I have heard of this system for two or three years back. We have experimented with the back-run system ourselves. We are running a machine that way now, at the 99th Street plant. That is where we have been conducting the experiments in the back-run system. Those experiments have been conducted since last year. I have followed those experiments only casually. I had to rig the machine up, but Mr. Woods has been more particularly following the manufacturing results, and he is the one to answer the questions as to what

results were obtained. I do not know the results specifically produced by that back-run system.

The back-run system consists in general of injecting steam into the off-take branch of the superheater and sending steam back down through the superheater, through into the carbureter, up through the carburetor and across the connecting branch or communication between the top of the [fol. 603] generator and the top of the carbureter, and then down through the fuel bed, making a down run by sending the steam back up through the set instead of sending the steam downward and through the gas reversing branch, and then through the carbureter and superheater in the usual way. In some plants, where the machines were not as efficiently operated as ours are, they accomplished a considerable improvement in their manufacturing results by the use of the back-run process. It is a reversal of one part of the usual process in one cycle of the operation. I think Mr. Woods could testify far better than I on the results of the so-called back-run process. I would not want to say whether it has really been decided there was any advantageous results in the process at all. Of course, our machines are very efficiently operated and some of these people in other cities got remarkable results from machines that were not as well operated as ours. The same answer as to any saving in labor and I would say the same as to repairs. The operation of those machines is a matter that comes casually under my observation, at times more than casually. That is, I am not directly in charge of the operation of the Consolidated Gas Company's plants; I am not responsible for their operation. I do not keep track of the results produced, from day to day, only periodically I keep myself informed as to how things are going.

[fol. 604] I do not know whether there is a record when the Hazelton type of boilers were put in, but I know in a general way they were put in about 1898 or 1899, I think, and it may have been as late as 1900 and they are still in use.

They are used all the time. I did not see them today; if they were used yesterday they were used for the twenty-four hours of the day. All of the boiler plant at all of our stations is in use, including these Hazelton Porcupine type

of boilers. Boilers of that type are not obsolete, we are putting in vertical boilers at Twenty-first Street, the waste heat boilers. The Hazelton boilers are vertical boilers which we bought from the Wickes Company. Vertical boilers are far from obsolete, and Hazelton boilers are a type of vertical boiler. I do say they are not obsolete.

In 1923 the company retired five Hazelton Porcupine boilers to make room for the new water gas generators, and those boilers are not allowed to stand idle. I disconnected them when they were disconnected and torn out. Prior to their retirement, they were used all the time, as a part of the boiler plant. The one 100 horse power and one of seventy five horsepower boilers are used for heating the holders of the two purifier houses, and are actually in constant use whenever weather conditions require and are equipped to burn solid fuel. I don't know how old those are.

[fol. 605] Referring to Diagram 2, Plaintiff's Exhibit 258 and to the eight purifiers on Lot 22 of Block 382, four were installed by the Isbell Porter Company and four by the Bartlett Hayward Company. Four are wet seal and four are dry lute boxes. A lute is a seal, and four are dry lute or dry seal boxes. The wet seal type is not obsolete and has not been found dangerous to use by the plaintiff company. The Central Union Gas Company did not change all its wet seal to dry seal. We did not change any new purifier boxes. Of the four purifier houses there, only one of them has dry lute box. In addition to this 11th Street plant, there are other plants where the purifiers are equipped with wet lutes. We have not a single plant where all of the purifiers are dry lute. At Flushing they are all dry lutes; that is the only plant in New York City.

[fol. 606] The eight purifiers at the 11th Street plant are each ten foot boxes as I recall and are eight feet deep. The boxes contain two layers of oxide, either thirty six or forty two inches, probably thirty six inches deep. That is a matter susceptible of adjustment by the Superintendent to meet his requirements.

The types of purifiers recently turned out of the 14th Street plant were single layer wet lute boxes. The purifiers that were taken out of the 14th Street plant could have been used in some other gas works but were not installed in any other gas works. The company sold everything that

was taken out of the 14th Street plant as scrap to different scrap iron dealers. They were scrapped after October, 1923, and were sold at the market price of the scrap prevailing at the time when the material was ready for removal. I conducted the whole dismantling operation. The contractor had to submit proposals and the scrap dealers for approval to me and I referred it to Mr. W. Cullen Morris for approval. There were half a dozen bidders. Mr. Morris approved the bid that was finally awarded.

[fol. 607] March 14, 1924, was the last date on which any manufacturer made purifiers with wet lutes of the kind which were in the 14th Street plant, for use in gas plants. Purifiers of that type are still used in gas plants of the Consolidated Gas Company and its affiliated companies. Purifiers to operate with center seals were manufactured since March 14, 1924, and still used in the gas plants of the Consolidated Gas Company and its affiliated gas companies. There are center seals used at the 21st Street station, the 99th Street station, the Port Morris works of the Central Union Gas Company, and the Zerega Avenue plant of the Bronx Gas and Electric Company. The object of the center seal is to operate purifiers on a rotation system, change the series so that each box in succession may be the first box or the last box. They are operated in that manner; that is the purpose of the center seal; that is the mechanism for accomplishing that purpose. Whether it is necessary to have one purifier always out of commission depends upon the construction of the center seal. Some are made that way and some are not. In general purifiers, we may say, consist of a series of four boxes with one off. One box must be off for renewing the oxide or revivifying the oxide. That is a part of the equipment. You could not run a purifying equipment if you could not have it boxed off to revivify the oxide. It does not make any difference whether it is equipped with a center seal or some other system of control; that purpose must be accomplished and the mechanism must provide for it or you could not run your gas plant. It is necessary that each purifier in suc-
[fol. 608] cession shall be switched off of the purification so that the oxide can be revivified. With the seal and valves now used, in modern practice, I should say that either with a center seal or without if that was desired, it is possible

to operate all boxes at the one time. My recollection is that all of our plants are so equipped that all of the boxes may be simultaneously purifying gas. The two stations at the 14th Street plant were in such condition that they could be used elsewhere for the same purpose at the time that they were taken out. They were scrapped.

Everything that was on Blocks 982, 988, and 991, forming part of the 14th Street plant went into the scrap heap. The two station meters which were at the 14th Street plant were in such condition that they could be used elsewhere for the same purpose at the time that they were taken out, but they were scrapped.

Referring to diagram 3 of Plaintiff's Exhibit No. 258, Block 982, Lot 13, is on the land on which the purifier house was located. To revivify the oxide would require quite a considerable area of yard space. The extreme southwesterly corner of the lot 13, of Block 982 occupied by the coal belonging to the Eagle Pencil Company had been rented to them under revocable terms, that exposed them to the liability of having to remove their coal on any day. A varying portion of that lot was used by the Eagle Pencil Company. At times they had only a small quantity of coal there and at times the area represented about two city lots. I said at the southwesterly corner of Lot 13, that is, it was on East 14th Street, about 400 feet west of Avenue C. As far as we were concerned, the use by the Eagle Pencil Com [fol. 609] pany of that part of the lot terminated on the 30th of October, 1923. I don't know what became of the coal that was there on October 31, 1923. Some had been removed prior to October 30th, 1923, and some there, on October 30th, 1923. I do not know what became of that portion that was there on that date.

On the westerly portion of this Lot 13, of Block 982, were some holders that formerly stood upon that property dismantled, in 1917, I think. Those holders were used in connection with the 14th Street plant down to the time that the holders were dismantled, I think, in 1916. Some other holders obviously took the place of those holders that were used in connection with the 14th Street plant. There were no other holders built on that plot. There were no holders put on Lot 13 in place of the holders that were dismantled in 1916.

On Lot 1 of Block 991 there was a brick boiler house, that was removed November or December of 1923. The use of the entire block by Booth & Flinn, leased to them under a requirement of the Public Service Commission, terminated to the best of my recollection in 1919 or the early part of 1920. It is not a fact that from that time on no use was made of that lot by the Consolidated Gas Company. The lot was used by the Consolidated Gas Company, as coal storage, after Booth & Flinn's occupancy terminated.

As to what labor saving devices the 14th Street plant had [fol. 610] down to October 30, 1923, in my previous testimony I described the machinery for conveying the coal from the coal shed, recovering it from the stock pile, conveying it to overhead hoppers at the east end of the retort house and charging the traveling charging machines from those overhead hoppers and then discharging the hoppers with discharging machines, just exactly the same way that we do in the B House at Astoria. I described it all in detail and that is all labor saving machinery. The only kind of gas made at the 14th Street plant was coal gas, and there was no water gas plant at that station. The same thing holds true that there were other labor saving devices used in connection with the equipment that was used to manufacture the coal gas there.

I have not fully covered all the labor saving devices that were there. They had automatic coke dumping inclines for dumping the coke buggies that received the coke discharged from the retorts. I do not recall when those were installed. They had been there for some years. Every steam pump is a labor saving device. If you do not have the pump the people have to carry the water in buckets. Everything of that character is a labor saving device. The coal was distributed in the coal sheds mechanically. I would have said it was a very efficient manufacturing plant [fol. 611] down to October 30, 1923. I do not know what the cost of gas was there as compared with some other plant. My acquaintance with the 14th Street plant goes back as far as 1907. From 1907 to 1914 gas was manufactured year after year, daily, there each year. It is my recollection that coal gas was manufactured on each day in the year 1907 to 1914, both inclusive and that the plant was running every day in the year, for an extended period

there, making gas every day. I do not recall as to the years 1915, 1916, or 1917, whether the manufacture of gas was at the same rate. I had to visit the coal gas plant at 14th Street, in the years 1915, 1916 and 1917. Gas was made at times in those years when I was there, but I do not remember in what period of time. From my visits to the 14th Street plant, I don't recall whether on every day of the years 1915 to 1917 both inclusive, gas was manufactured at that plant. I do not know that on any day from 1908 to 1915 inclusive, the maximum 24 hour make at the 14th Street plant was 1,364,000 cubic feet or less than one third the rated capacity of 5,000,000 cubic feet, nor that during that period the coal gas plant at 14th Street ever attained its daily manufacturing capacity. I do not know that from 1916 to 1918 inclusive the maximum day's make was 931,000 cubic feet or less than one fifth of the rated plant capacity. I do not know that at the time coal gas was manufactured at the 14th Street plant it took from three to six weeks to bring any portion of the plant from a cold condition to one where gas could be produced. There [fol. 612] was not any time in 1922 when any of the equipment was removed from that 14th Street plant. It was removed in November and December, 1923, and January of 1924, by myself. In June 1923, and in October 1923, the property at 14th Street and 15th Street, used for gas storage purposes was physically connected by pipes but geographically separated by 15th Street. The gas storage property at those locations could be operated in June and October 1923, if there had been any property there containing the gas production equipment, the same as any other gas holders on the transfer system. All of the holders there interconnected on the transfer system, could be filled with gas; the holder property was in no way dependent on the coal gas manufacturing property as storage holder any more than any other holder on the system. We could get the gas from either plant.

I do not now recall how many tons of coke and coal was on hand at the 21st Street property. It was in the sheds at Astoria, sent there about October of 1923—just prior to the sale. It was some thousands of tons. There was some ammoniacal liquor in June, 1923 and that belonged to the operating department, and was sent away about that same

time, in November, 1923. I do not recall how much was there at that time. I think there was some fuel there. I called the attention of Mr. Carter, Jr., to that situation there. I think it was there as of October, 1923 and was removed in November. I do not recall how long prior to that the men were employed in gas making labor there. Those men were not employed there as gas making labor at the plant. I do not recall when the 14th Street coal gas [fol. 613] plant last operated. The Government had the plant during the war and my recollection was we ran it after that. I do not recall whether any was made there after 1919. I do not know how long it remained in operation, or how much gas was made during that time. I cannot tell how much coke was sold as a result of coal gas operations at the 14th Street plant. The gas companies operating in the City of New York with coal gas plants, having over one million cubic feet daily capacity, using the type of retort benches that were in existence at the 14th and 42nd Street plants are the Central Union Gas Company, and the Astoria Light, Heat and Power Company and they still use them; horizontal retort benches served by power driven machines. I have heard the term semi-recuperative used but just what the user of the phrase intends may be a different thing. I would not say that that semi-recuperative was a type of bench that uses in the furnace at least half of the coke in producing gas. When the 14th Street plant was last operated, I cannot tell what percentage of the coke made was actually sold or whether or not any was sold. There were not what are known among gas engineers as full depth recuperative benches at 14th Street. Some of them were at 42nd Street. I do not know whether in any full depth recuperative benches, the benches heated with a consumption not to exceed 14 pounds of fuel per 100 pounds of coal carbonized. I do not know how many pounds of fuel were used for each 100 pounds of coal carbonized. The benches at the 14th Street plant were what is known as half depth benches.

[fol. 614] Whether coal gas would give a quality of only 600 B. T. U.'s per cubic foot, or less, depends upon the coal used and other factors. I am not prepared to say whether there is any economic operation of a coal gas plant where 600 T. T. U.'s per cubic foot would represent the results.

When the 14th Street plant was operated, I do not know what was the heating value of the gas made. I do not keep track of the heating value of the coal made at Astoria. I do not know how much tar was recovered per ton of coal carbonized at the time the 14th Street plant was last operated. The ammoniacal liquor was sent to the dock through pumping lines that extended down the south side of 15th Street under a franchise from the City, and there was a connection from the bulkhead to supply the barges and to the best of my recollection, they were the barges of the Barrett Manufacturing Company—that is, to the extent of my knowledge. If the 14th Street plant were operated to capacity it is not a fact that it lacked facilities for coal storage. Whether the facilities would be ample depended on other factors, as to what immediate uses or disposal there was for the coal. They sold some of the coke at the time that the 14th Street plant was operated. They used some of it themselves. I do not know the full story of what was done with the coal. I know that prior to the condemnation proceeding, they had quite some coke stored on the property between 15th and 16th Streets, east of Avenue D. I am referring to one of the blocks taken for the extension of the Willard Parker Hospital. The 14th Street station had adequate facilities for coke storage at the time it was operated. I can recall distinctly that there was a lot of coke stored over in this lot. That site for the Willard Parker Hospital was taken January 31, 1907. After January 31, 1907, we continued to occupy that plot under an arrangement with Dr. Darlington, former Health Com-
[fol. 615] missioner until about the spring of 1912. Then the city took physical possession of the property. There was a lot of coke stored there. After we lost that space in the yard, we stored a lot of the coke between the coal shed and the retort house on Block 988. It has not been the practice, prior to that, to accumulate large quantities of coke in that way east of the retort houses. We could have stored coke still in the yard that I spoke about, just east of the retort house, and also a portion of Lot 1 on Block 991 would have been available down to October 30, 1923, at the 14th Street plant. I am sure it did make 5,000,000 cubic feet a day, but I do not recall when. If the plant had been called upon to produce 5,000,000 cubic feet per day in 1923,

that gas would have been enriched to 650 B. t. u.'s in several ways. Whether it would be the method employed in the discretion of Mr. Woods or not, I would not undertake to say. It would have been enriched from the 21st Street plant. When the plant was operated at 14th Street, it relied upon the enrichment of the gas, by means of oil gas retor-s located at the 21st Street plant, that is what was done at one time, but not always. After that method was discontinued it was enriched by mixing it with water gas from the 21st Street station. I do not recall when that method of using gas oil discontinued. Part of the equipment available for that purpose was discontinued in 1921 or 1922. Then I just cut off that oil gas line, in preparation for dismantling the plant. The line was still in place from the 21st Street plant to the 14th Street plant. It would [fol. 616] depend upon the gas at the 21st, as to whether the gas from the 14th Street would be mixed with it from the two holders on block 989. There has always been commercial gas sent from 21st Street to the holder on Block 989, or the two holders after the second was built, and whatever gas was manufactured at 14th Street was mixed with the commercial gas in those holders. I do not recall that any enrichment of the coal gas manufactured at the 14th Street plant from 21st Street at any time was done during 1920, 1921 or 1922. I do not recall prior to 1921 or 1920. If the 14th Street station had been making five million cubic feet of coal gas daily in October of 1923 upon the chemical analysis of that gas and a consideration of its properties, then it could have been determined what quantity of water gas must be mixed with it to bring it to any standard which might be fixed by legal authority. The leanest gas that can exist in the universe has some calorific value if it is combustible. I do not know whether the 14th Street plant ever manufactured coal gas containing 600 or 650 B. t. u.'s per cubic foot, or whether the 14th Street plant at one time was manufacturing coal gas of 22 candle power, unless they used Cannel coal, and as a matter of fact, I can recall when they had a lot of Cannel coal in the coal shed. Cannel coal is spoken of as a soft coal but it is very much firmer structure than our bituminous coal. There is a lot of it in England and in the United States and Australia, the Aus-

tralian coal being very hard. None of it is being used by the Consolidated Gas Company at the present time.

[fol. 617] Referring to the 42nd Street plant the daily capacity of that coal gas plant was 4,500,000 cubic feet. That plant was equipped with certain benches in which the gas could be enriched. The enriching of the gas was done at the 42nd Street plant itself. It was not necessary to rely upon another station for the enrichment of the gas made at the 42nd Street plant. That apparatus would be described as enriching benches, there were certain benches equipped with necessary equipment for gasifying the oil and enriching the oil and mixing with that the unenriched coal gas in the hydraulic main. I think it was a different quality of oil than gas oil that was used for the enriching process. They are just removing the remainder of it from the tanks over there. To enrich a thousand cubic feet of coal gas, the amount of oil I used would depend on the quality of the gas and the kind of oil and the process used. I do not know how much was used when the 42nd Street plant was manufacturing. I do not know how much coking coal was used in 23rd or 42nd Streets. I don't remember when coal gas was last used at the 42nd Street plant. I think it was in 1917 or in 1918, somewhere along in that period. When coal gas was made at 42nd Street, I do not know what the maximum or minimum day's make was. When it was operated, the 42nd Street plant ran every day for years. I don't know in the very last operating period how many days in the year it ran, but it is my distinct recollection it ran every day in the year for years. I do not know what quality of coal gas was then made. I don't know if it always enriched at the 42nd Street plant.

[fol. 618] Referring to the 21st Street Station, the blowers on the old sets that are there are what would be described as low pressure type, although the pressure is somewhat higher than persons might commonly understand by low pressure. The high pressure blowers recently installed are of the two stage type driven by turbines; the old blower apparatus is of the one-stage type driven by horizontal steam engines.

It is not a fact that the 11th Street plant is operated at only half of its capacity. There is no such limitation on the plant. At times as circumstances require, the 11th

Street plant operated to its full capacity; that depends on circumstances and necessity and not rule. In July, it is not operated to its full capacity of 24,000,000 cubic feet. From December 15th to March 15th, which is the peak period of the year, if the gas requirements are such the plant would be operated to its full capacity of 24,000,000 feet and we might have to squeeze it beyond depending upon necessity and no rule. If the 11th Street station were operated to its full capacity, it would have been necessary to provide the additional capacity at the 21st Street station to make up the capacity lost at the 14th and the 42nd Street stations.

Speaking of Block 991, Lot 1 where coal was stored, that was three blocks from the nearest generating station. At the time the plant was operated, 14th Street was a coal gas plant. It was not a generating set. The coal was stored nearby the point of consumption of the coal, in the coal shed on the easterly end of Block 988. The place where the coal [fol. 619] was used or the coal stored, was about 150 feet from the retort houses. The plant wos operated with cable operated cars so that the coal could be reclaimed by a grab bucket from within the building deposited in these cable operated cars and transferred to the overhead hoppers at the east end of the retort house. It got to the place where the coal was stored by trucks from the docks, and then reclaimed there. A large part of the coal that was used at the 14th Street plant in coal gas manufacture was rehandled. Some may not have been because the carts coming in could dump directly into a pit from which this grab bucket could receive the coal. That rehandling could not have been avoided.

Block 989, Lot 1, was not sold to the New York Edison Company; the title is still in the Consolidated Gas Company. The portion of the 14th Street property was sold to the New York Edison Company on October 30, 1923, comprised Block 982, Lot 13, Block 988, Lot 1, and Block 991, Lots 1 and 47.

[fol. 620] New York, March 18, 1924.

Met pursuant to adjournment.

HERBERT W. ALRICH, a witness in behalf of the plaintiff, recalled.

Cross-examination continued by Mr. Donnelly:

You did ask me at pages 1013 and 1014 of the mimeograph copy of the record, if it was not a fact that all of the equipment at 14th Street plant which you enumerated had not been removed in 1922, and I answered it was not, that it was removed in November and December, 1923, and January of 1924, by "myself."

Referring to the Hunts Point tract, I do not know whether or not it has been decided, as a part of the plant that is to be erected there, whether there are to be retort houses constructed there in connection with the manufacture of gas, or coke ovens. There are some retort houses to be erected on the Hunts Point property in connection with the manufacture of coal gas; there will be a coal-gas equipment of some type or character. I do not know what Mr. Woods may have decided upon about putting some coke ovens upon that tract.

[fol. 621] The waste heat boilers at the C and D plants at Astoria are all a specific type of Babcock & Wilcox boilers. They were not made by the United Gas Improvement Company. They are not the same type as those made by the U. G. I. Company. The simple fact is they are waste heat boilers. As the name implies, they generate steam from the waste heat only. They are not what are called illuminating gas boilers. Those are the two types, illuminating gas boilers and waste heat boilers.

COLIN C. SIMPSON, called as a witness on behalf of the plaintiff, being duly sworn, testified as follows:

Direct examination by Mr. Ransom:

My name is Colin C. Simpson. I am General Superintendent of Mains and Services of the Consolidated Gas Company of New York. I have direct supervision of the

[fol. 622] installation, maintenance and repair of mains and services in the Borough of Manhattan and in the Central and Northern Union sections of the Borough of the Bronx, and I have advisory superivision of the installation, maintenance and repair of mains and services in those portions of the Bronx, Queens and Westchester where there are companies associated with the Consolidated Gas Company.

In a measure, I have general supervision with respect to the companies located on the so-called transfer system of the Consolidated Gas Company, and advisory supervision with respect to the companies in Westchester and the Bronx and the New York and Queens Gas Company.

I keep myself informed as to the work on mains and services done by the Consolidated Gas Company, and by its affiliated companies. With reference to the work done in Manhattan and in the Central and Northern Union sections of the Bronx, that is done at my direction and order by the District Superintendents in those sections, working under my direction and supervision. With respect to the companies affiliated with the Consolidated Gas Company in the other sections of Manhattan, Bronx, Queens and Westchester, I advise with the officials and distribution chiefs of those companies with reference to main and service installation. I spend a considerable portion of my time actively in the field, inspecting the work of installation and repair. I am, a portion of each day in the field practically [fol. 623] daily, except when I am called on for other duties, like at the present time. That is supervising work which, as to the plaintiff company, is being done under the more direct supervision of the District Superintendents. I give the directions and instructions to the District Superintendents.

My late father C. C. Simpson, was General Superintendent of Mains of the Consolidated Gas Company from 1889 to the time of his death in 1913. Through constant association with him and visits to his office and around the work, I gained considerable knowledge of Street Department work, before becoming actively employed therein. During the summer of 1904, preparatory to entering college, I obtained a position as inspector for the Department of Mains and Services, on the construction of a 36" transfer main

from 111th to 132nd Street stations. On this work in addition to giving line and grade for the contractors, I obtained through the contractor's workmen practical instruction in pipe laying and jointing. In the fall of 1904 I entered the School of Applied Science of New York University. The engineering course which I took up required a certain amount of practical work, and, during the summer of 1905, I obtained a position as inspector with the Astoria Light, Heat & Power Company, on the construction of the New Astoria plant, and was assigned to dock and bulkhead construction, and the layout and dredging of the channels. Dur- [fol. 624] ing the summer of 1906 I obtained a position with the Standard Gas Light Company as inspector on the construction of the holders at Avenue A, 61st to 63rd Streets, and also assisted in the layout of the mains connecting these holders to the new valve house at this point, and also to the general transfer system. During my junior year in college, I was offered a position as assistant to the Gas Engineer of the Westchester Lighting Company, which position I accepted as I had at this time definitely determined to take up the gas business as a profession. While connected with this company my work covered the entire field of gas manufacture and distribution, and I had considerable experience in main laying. In June of 1907 while still with the Westchester Lighting Company, I was offered a position with the Degnon Contracting Company, contractors for Section #2 of the Bridge Loop Subway, as Assistant Engineer. The work on this section involved the temporary removal and reconstruction of all gas and water mains, and my work was largely in this connection. Upon the completion of the Bridge Loop Subway, I was transferred by the Degnon Company to the North Section of the McAdoo Subway, then under construction.

During December, 1909, the Consolidated Gas Company offered me the position of Assistant Engineer of the Department of Mains and Services, to take charge of the work [fol. 625] of laying approximately 30 miles of 30", 36" and 48" transfer and distribution mains in the Boroughs of Manhattan, Bronx and Queens. I accepted this position, and in January, 1910, after making the necessary field surveys laid out the routes for the mains, had the necessary plans, contracts, and specifications drawn up, for such work

as was to be done by contract, and also, arranged for the procurement of the necessary amount of skilled and unskilled labor for such work as was to be done by our own forces. I also arranged for the purchase and delivery of the necessary material. When the construction season started, I took active charge of this work and remained in charge for the entire year. In laying the above mentioned mains a great many engineering problems of more than ordinary difficulty presented themselves. It was necessary to cross the Harlem River with one 48″ and two 36″ mains, and it was also necessary to construct bridges over railroad cuts at several points and to design and place a great deal of other special construction in crossing subways, large sewers, and the Croton aqueduct.

On January 1, 1911, I was promoted to the position of Engineer of the Department of Mains and Services, having charge of all construction other than routine work.

In July, 1913, I was promoted to the position of Assistant General Superintendent of the Department of Mains and Services, and on February 1, 1915, was promoted to the position of General Superintendent, which position I have [fol. 626] held, and now hold, with the exception of one year's absence (December 1, 1917, to December 21, 1918) in France, as Captain of Engineers, United States Army. During my service in France I did a great deal of miscellaneous engineering work including the laying of approximately five miles of water mains of various sizes, and I also designed and installed the gas supply to the Chemical Warfare Service Laboratories in the field training area. Since my discharge from active service in the Army I have been commissioned "Major Engr. ORC."

During the year 1916 I had charge of the laying of two 72″ cast iron mains in the Astoria Tunnel, which means were then and are now the largest gas mains in the world.

In my position as General Superintendent of Mains and Services of the Consolidated Gas Company, I am required to exercise advisory supervision over all the mains and service operations of the gas companies in the Bronx, Westchester and Queens, affiliated with the Consolidated Gas Company.

I am a member of the American Society of Mechanical Engineers, the Aemerican Gas Association, the Society of Gas Lighting, the Society of American Military Engineers and am Vice-President of the Society of Gas Engineering of New York City. I have been licensed by the State of New York to practice professional engineering, having received License #2482.

I made appraisals of the mains and services of the companies affiliated with the Consolidated Gas Company on [fol. 627] the transfer system in connection with the rate litigation of 1919-1920, and also of the mains and services of The Bronx Gas and Electric Company in connection with its rate case in the State Court, and I testified in those appraisals in these actions.

I have also been engaged in making appraisals of the mains and services of all of the companies in the Consolidated System, that is, in Manhattan, the Bronx and Queens and of the mains and services in other parts of the City in connection with pending rate litigation, and have testified to these appraisals in the cases of the New York and Queens and the Bronx Gas and Electric companies.

I keep records of the installation of mains and services in the territory served by the plaintiff company and by its affiliated companies in various parts of the City of New York. I personally participate in the purchase of material used in the construction and in the maintenance of the mains and services in various parts of the City of New York, including the Borough of Manhattan and the Bronx. The major main and service materials such as pipes, special fittings, valves, lead, lead wool, wrought iron service pipe and service fittings, are usually bought on yearly contract. Sometime in the latter part of the year, the late fall or early winter, I obtain from the district superintendents under my direct supervision and control and also others of the companies under my advisory supervision, [fol. 628] their approximate requirements for these different materials for the coming year. I then tabulate these different quantities of material and I add to them or subtract from them, as my judgment indicates is necessary, in accordance with the program for the following year. The quantities then are sent to the purchasing department of

Consolidated Gas Company, with requests to obtain bids and, when such bids are received, they are brought to me. I compare the bids carefully, look into the reliability of the bidders for delivery, determine the lowest reliable bidder in each case, and send the recommendation to the purchasing department to purchase the quantity of material at the lowest bid price. I prepare or forward to the purchasing department the specifications for materials that are to be used in either construction or maintenance of mains and services. In the case of pipe, I use the American Gas Association specifications. They are standard specifications for the purchase of pipe in the gas industry. In the case of lead, wool or iron, and supplies of that character, I formulate the specifications as to type and quality. Those specifications go from me to the purchasing department. The investigation as to the dependability of the various bidders for delivery and proper performance is made by me. I check up the figures embodied in submitted bids. The letting of the contract and the purchase of the materials in the light of the bids receives my recommendation.

[fol. 629] After having done these various things which I enumerated with respect to the bids received on the particular purchase, I forward the recommendation to the vice-president in charge of purchasing. He takes it to the Executive Committee, of the Board of Trustees of the plaintiff company. The matter is passed on by the Executive Committee. After the contract has been let for materials for my department, as to the time of delivery, my general storekeeper is furnished with a copy of the contract and keeps right after the foundries for deliveries of the pipe. With reference to the quality of material, in so far as cast iron pipe and special fittings are concerned, we always inspect those materials at the foundries. The inspectors additionally make spot inspections where special castings such as valve and street boxes and wrought iron pipe is being made. I have under my direction inspectors at all times in the foundries where work is being done on my pipe contracts, so that the first inspection is by my men at the mills. There is an inspection as to defective workmanship and also checking as to size and quality when the materials are received, and that inspection is made at our store yard,

upon receipt of the material. They inspect it as it comes in at the yard, before the receipt is signed.

[fol. 630] I have charge of the employment of labor in the construction and maintenance work of the Consolidated Gas Company as to mains and services.

I am now and have been for several years familiar with the prices of materials and labor entering into the construction and maintenance of mains and services in Manhattan, Bronx, Queens and other districts in the City of New York and vicinity, and have from time to time, had frequent opportunity to serve the mains and services of the plaintiff company as installed and exposed in the ground. Since January 1, 1910, the Consolidated Gas Company has laid approximately 425,000 feet of mains. In this same period, on subway work, there has been completely exposed, relocated, relaid or altered, approximately 300,000 feet of Consolidated Gas Company's mains. The 425,000 feet is exclusive of the 300,000 feet. That is, that was relocation and relaying absolutely necessitated by the subway work of the city, and in addition to it I was in direct charge of this work and was personally present for a good part of the time, except during the period I was in France during the war. There were approximately 110,000 openings made during the past 14 years in the Borough of Manhattan for the purpose of repairing or altering mains or for the purpose of laying or repairing or altering services. Each of those openings will expose at least one main and often more, and, in addition, will often expose a service. I am around a considerable portion of each day on that work.

[fol. 631] I am out on those districts of inspection and supervision and I know the size and location and physical condition of the mains and services where exposed. That has been my habit during the time of my connection with the plaintiff in this work. Practically any opening made in the Borough of Manhattan will expose mains and services of the Consolidated, and it has always been my practice to observe the mains in such openings, and also the manner in which other people are doing the work.

I produced the last volume of my main record book. That is a book of records kept in my department under my supervision, and it is entitled "Statement of Mains, Consolidated Gas Company." It is a cumulative record of the mains of the company. There is a page for each month. It is a

record kept statistically with respect to size and quantity. There is a page for each month, showing in the left hand column the various sizes of main; in the next column the total carried forward from the previous month; in the next column the quantities of various sizes laid during that month; in the next column the quantity of the various sizes taken up during that month; in the next column the quantity and the various sizes, withdrawn from service, but left in the ground during that month; coming down to a total for the end of the month.

[fol. 632] This book relates to the mains of the plaintiff company alone. That data is obtained from signed monthly reports submitted to me by the district superintendents under my direction in the various street department districts. There are three street department branches or districts. This main record book has, as its primary source, these signed monthly reports from the district superintendents under my direction. Those reports come to me in the regular course of business. The employees in my department make the entries in this main record book under my direction and supervision. This record goes back to November 11, 1884, and it is one of a series, running back to the formation of the Consolidated Gas Company. This record is kept in the regular course of business, under my personal direction and supervision. This is the current volume, in which the present entries are being made monthly with reference to additions and withdrawals of mains during the years 1922 and 1923. I have had occasion, from time to time, to check the entries in this book with these monthly reports as they come to me over the signature of my District Superintendents. I found that they checked.

I also keep a main record upon maps in my office in the regular course of business. (Witness produces sample map). These are just typical maps which I have produced, and which I keep in the regular course of business. The sheet is 66 inches long and 33 inches wide. I have 730 maps to cover the plaintiff's territory.

[fol. 633] Each of these maps shows a number of blocks, with a street or avenue on each. These main maps show the mains that are listed on this main record book of the plaintiff company. They also show the mains of The Standard and the New Amsterdam where the streets or avenues have mains of any other companies. Those mains

of the plaintiff and of the other companies are shown in the exact location, by scale, in their location in the respective streets and avenues. They are shown in their correct size, by the color of the main and also by the note opposite the designation of the mains. The identity of ownership is the designation by note. The color in black and red, for instance, is a 36, the color black being 30 and the red being 6. The color, in addition to showing the relative size is primarily the indication of the size of the main in the street, and there is also shown in conjunction with each main on this map, not only the size in numbers, but also the identity of the ownership. In addition the depths of the mains at the different points in the various streets and avenues are indicated at critical points, following the designation of the main. That is, the numbers and symbols which following designation of ownership indicate the depth of the main at what you might call pivotal or critical points. For instance, on this map, the map No. 292, showing 66th Street from Amsterdam Avenue to Broadway, at Amsterdam Avenue the six-inch Consolidated main is three feet deep and the 36" New Amsterdam main is 7 feet 2 inches [fol. 634] deep. Those maps were designed and prepared under my direction and supervision. The information as to the location of the mains was obtained from several hundred thousand work tickets and field notes and sketches which had been saved for years for the purpose of making up such a record, in connection with the openings in the streets, for the repair of mains and services and the like. There were several hundred thousand of these tickets and sketches. They would fill a fair portion of this room. Every time an opening is made, the sketch comes in from every job, and the location of the mains is checked with the map.

The transfer main is a main which is not supplying consumers but is taking gas from one holder station to another holder station.

On the map just referred to as Map 292 at 66th Street, the thirty-inch Consolidated crosstown transfer shown there is not a main from which consumers get service. These transfer mains are listed on these main books I have referred to, and included in the main mileage. That is, the transfer mains connect points, for example, like the

holders or holder stations and the transfer mains are distinguished from distribution mains along which there are services. I have tested the correctness of these maps very frequently. This is the absolute record that is used in making openings in the street. Without exception, the mains are found where they are indicated on the maps. [fol. 635] When men are going out from any branch to make the opening these maps are the basis, and when they go there to make the opening, according to that map they find that the main they expect to find is there. These are just typical maps out of the 730, and each of them has a number in the lower left hand corner. There are no duplicate numbers, except that in some cases there are maps, we will say No. 56 A, B and C where you need more than one sheet to get the information. That is, sometimes we have subdivisions of a given number. In that case they would bear a letter in addition to the number. As a result of the checking of these maps by me made with these work tickets and sketches in the field and by my personal observations in the field, I have found them to be correct. These maps correctly depict the location and the sizes of the mains of the plaintiff company. The sizes indicated on the map come from the field tickets. The sketch would indicate that at this point there was a 36-inch, so far from the curb, and a 6-inch so far from the curb at a certain depth. The sketch at this point indicates similar things, wherever openings were made anywheres in the street and there are thousands made each year, in connection with openings of services and repairs and sometimes new construction. We utilize all the information obtainable.

The sizes and the lengths shown on the map record agree with the figures shown in the main record. I have measured [fol. 636] the mains on all of the maps and found that they did agree substantially with the main record. I have taken these maps and scaled and measured them for sizes and lengths,—they are drawn right on the paper. These maps of which the three here are a part have been offered to the representatives of the defendants, and they have been using them every day. The same thing is true of the main record book, except that they have apparently finished with that book, and they have been using the maps almost every day, for possibly ten days.

By the Master:

The defendant Attorney General's experts first began to make an examination of the books and records of the Main Department approximately two weeks ago; it may be a little more than that, I don't remember the exact date.

By Mr Ransom:

I am speaking now with respect to the Consolidated.

[fol. 637] By the Master:

I have in my department the costs of the laying of mains and services and repairs and so forth.

By Mr. Chamberlain:

This main record book does not make any differentiation between distribution mains and transfer mains.

By Mr. Donnelly:

It contains a record of both.

By Mr. Ransom:

You would have to look at the map to tell which are distribution and which are transfer mains.

By the Master:

The transfer mains are of the same size, of the same material as the distribution mains and laid in the same way. We have 48" distribution and transfer and 36" distribution and transfer.

By Mr. Donnelly:

The main and record book is kept in my department under my direction and supervision. It is the only record the company has in so far as I know of the footage of the mains. It is used by the Company. Any time the company wants any information as to the footage for distribution of charges, or anything of that sort, they must get it from that book.

By Mr. Ransom:

[fol. 638] This book is furnished by the plaintiff company, and is kept by me in the regular course of my official duties, and by the men under my direction. It is the statistical record of my department, the same as the maps are a graphic record.

(Main record book received in evidence and marked Plaintiff's Exhibit No. 266.)

By Mr. Ransom:

These maps are in a continuous state of change. According as to the distribution system is replaced, extended or renewed, as the book changes the map changes.

By Mr. Donnelly:

These three maps speak as of March 18, 1924, or in other words, they represent the conditions that exist now at this time.

By Mr. Ransom:

If there are changes made tomorrow in our main system, these maps would be changed probably within two or three days.

By the Master:

This book covers the period July, 1917, the last entry is February, 1924.

By Mr. Ransom:

It is a cumulative record, and the books kept prior to that by the plaintiff are in my possession. They have been available to the defendants.

I have a book record of services of the plaintiff company and this book shows the services owned and used by the Consolidated Gas Company. This is one of the book records kept in the regular course of business, entitled "Re [fol. 639] ports of operations, mains, services and public lamps, Consolidated Gas Company." This book is kept statistically and cumulatively in a similar manner as to what I have described as to the main record, except that

services are kept by size and the number of that size. There is a page in which additions and withdrawals are shown, and in various columns the sizes and the numbers of the services are shown—the number at the close of the preceding month and the number on hand and withdrawn during the month.

By the Master:

It does not show the length of the service.

By Mr. Ransom:

In this record of services I have obtained the information as to the additions and withdrawals during each month from signed monthly reports sent to me by the district superintendents of our three street department branches. Those reports come to me in the regular course of business and I have occasion from time to time in a manner such as I have already described to check the entries in this book with those monthly reports as received, and the accuracy of the monthly reports. This record of services is kept under my immediate personal supervision. Employees in my department acting under my supervision made the entries in the book, and this recording of the services has been kept by the Consolidated Gas Company as far back as 1885. This book does not show the location of the services.

By the Master:

We are in process of making a survey of all of our services but that is not complete as yet.

By Mr. Ransom:

So far such checks as we have made from time to time in the course of our duties; they have verified the record of ownership and use.

By the Master:

Our book shows a record of a certain number of services, their size and number, and the number laid or relaid and cut off and lost.

We have a labor ticket for each job.

[fol. 640] By Mr. Ransom:

These reports are made up from work tickets for each job, and the men who are out on the job make their records about the services, where it is and what is done, and those come into the branch office of the three branches. It is from these that the monthly reports are made up.

By the Master:

We check continuously these reports of the work done with either work ticket or with the work in the ground. The tickets come to my office when they have been completed and those are checked each month against the report as it comes in.

By Mr. Ransom:

We get the work tickets also from the district offices.

By the Master:

I am out part of each day and I know from the report that is sent to me right on the face of it whether it is within one or two services correct or not. I have seen practically all of these services go in. I have checked the work tickets [fol. 641] and the reports with the results as shown in the book.

By Mr. Ransom:

And with the work done in the field. As to the 110,000 openings I have spoken of in connection with the service, I have seen many of them as they were contemporaneously made, and these openings exposed mains and services.

By Mr. Chamberlain:

This book does not show the locations or the length of the services. The work tickets show the location and the length.

(Record received in evidence and marked Plaintiff's Exhibit No. 267.)

By Mr. Ransom:

In the regular course of business entries began to be made in Exhibit 267 in the month of January, 1912. Rec-

ords are in existence and available as to the monthly additions and withdrawals of services before that time, running back to 1885 and those records have been available to the defendants. These work tickets come to my office for purposes of check and are filed there.

I have been engaged in making an inventory and appraisal as of June 1, 1923, of the mains and services of the Consolidated Gas Company of New York, and I have set forth the result of that work of inventory and appraisal on two schedules, one entitled "Reproduction Cost of Labor and Materials Necessary for the laying of Mains of the [fol. 642] Consolidated Gas Company of New York as of June 1, 1923," and the other entitled, "Reproduction Cost of Labor and Materials Necessary for the laying of Services of the Consolidated Gas Company of New York as of June 1, 1923." In making the inventory and appraisal of the mains and of the services, I obtained the quantity of mains from the statement of mains, Consolidated Gas Company, which is Plaintiff's Exhibit 266. The quantity of services I obtained from the service book of the company which is Exhibit 267. With reference to the mains I determined for each size the average quantity of the labor of the various kinds which would be required to produce an average foot of main of each size in Manhattan and in the Bronx and I applied to this average quantity of labor the market value of such kinds of labor as of June 1, 1923. I excluded in this average the mains laid under the Harlem River. The unit which I used in determining the different elements entering into the labor cost was the cost for each of these labor elements of a foot of each size of main. The mains in the two tunnels are not Consolidated mains. In determining the different elements of labor entering into the installation of a foot of each size of main, I used the current market rate of labor of various classes as of June 1, 1923. I took the wages currently paid as of June 1, 1923, and obtained an average labor cost per foot for each size of main laid in Manhattan and in the Bronx,—that is separately. With respect to the materials I determined the [fol. 643] quantities of the different kinds of material that would enter into the construction of one foot of each size main in Manhattan and in the Bronx and applied to such quantity of material the current market price as of June

1, 1923, thus obtaining an average material per foot price for Manhattan and for the Bronx and the material per foot price added to the labor per foot price for each size in the two boroughs, the total gave me a total labor and material cost per foot for each size for the two boroughs. I then multiplied the total per foot of labor and material by the quantity of mains in feet in each of the two boroughs and therefrom obtained a sub-total to which I added the reproduction cost of the 36 inch main under the Harlem River and the 24 inch main under the Harlem River and the reproduction cost of pavement paid for by the company. That is pavement actually disturbed by the company in laying the mains, the cost of employees and public liability insurance, the cost of pavement inspection and permits in the Borough of Manhattan only. In Manhattan you have pavement inspection and permits and City inspection, and in the Bronx only the City inspection. That is exclusive of charges for engineering, superintendence and contractors' profit and administrative legal, engineering and miscellaneous general expenses during construction, interest during construction on mains and other undistributable structural cost.

By the Master:

That statement does not show the transfer mains separately. I can give the length of transfer mains, but I do [fol. 644] not happen to have it here. And that length multiplied by either the Manhattan or the Bronx per foot cost would give you the cost of the transfer mains. Then it would be necessary to add the overheads to that. There is no distinction between so-called transfer or so-called distribution mains with respect to either labor or material costs, or the manner of laying or any other factor, and the transfer mains come in various sizes, according to the necessities, and tending to the larger sizes. There are some mains that might be both in the category of transfer main and of distribution main. They may not furnish service to the consumers but may connect with other mains along the route which almost directly furnish service to the consumers. So there is no hard and fast line of distinction between the two classes of mains.

By Mr. Ransom:

With respect to services, I have determined the cost of [fol. 645] labor and materials in practically the same way as I have testified with respect to mains, except that the services are taken as a unit per service and not per foot. For the purposes of this inventory and appraisal, I have taken the quantities of mains and services as of June 1, 1923, and I have taken the unit prices of materials and the rates of pay of labor and the cost of doing different elements of work as of June 1, 1923, upon the basis of a sub-contractor doing the work, without including any sub-contractor's profit, which makes it the actual cost to the sub-contractor.

By the Master:

I have omitted the same elements as to services that I have omitted as to mains. I have made them both absolutely on the same basis. I can tell the cost per service because I know the average feet of pipe that go into the average services.

By Mr. Ransom:

30 feet is the average length of service pipe, and if you wanted the footage of the total number of services, you [fol. 646] would multiply it by 30. The unit of cost on these services is a service, and I have set forth on this exhibit with respect to services in the different columns substantially the same items that I did with respect to mains, with the exception that the cartage is taken separately there per service.

There is a difference between the labor cost and the material cost per foot of mains laid in the streets of Manhattan and the labor and material cost per foot of mains laid in the Bronx. The excavation in the Bronx is somewhat easier than it is in Manhattan, and therefore it is cheaper. The percentage of rock is different as between Manhattan and the Bronx. The material cost, the percentage of specials is less in the Bronx than it is in Manhattan, because there are less sub-surface structures, and the amount of lumber used in bridging and sheathing the ditches is less in the Bronx than in Manhattan, but the

prices of pipe and the basis materials are just the same in the two boroughs. I used $3.60 per cubic yard for excavation in the Borough of Manhattan. There is difference in the elements of cost of main laying in the Borough of Manhattan, both with respect to the excavation for laying the mains and with respect to laying the pipe itself, there are considerably more sub-surface structures in Manhattan than in the Bronx. The presence of a greater number of sub-surface structures increases the cost in almost direct proportion to the number of sub-surface structures that exist. There is a difference with respect to the cost of calk- [fol. 647] ing the different types of joints; the lead wool joint costs more than the cast lead joint to calk and there is a difference in the different territories in that respect. There are more lead wool joints in Manhattan than there are in the Bronx. In the Borough of Manhattan it has been our practice to repair all joints which might have been leaking or might have been exposed by an alteration or repair with lead wool, and that practice has not been the case in the northern section of the Bronx. The Borough of the Bronx, in so far as the portion of it covered by this appraisal, would have about fifteen per cent rock, and the Borough of Manhattan about ten per cent. There would be more rock in that section of the Bronx.

With reference to the amount of pavement actually disturbed by the company and actually paid for by the plaintiff, in some cases I was able to determine where the main was laid and the actual amount and kind of pavement which was disturbed when the main was laid, and replaced by the company when the main was laid. I was able to ascertain that from the books of the company. In other cases I was able to determine from the records of the company when the main was laid and then from the records of the Borough President's office in the Borough of the Bronx, the type and kind of pavement which existed in the street and which would have to be replaced by the company when the main was laid. I have included no paving here except where the pavement was actually disturbed in the laying [fol. 648] of mains. From the Borough President's records we found out the kind of pavement that was in a certain street, at a certain period, where we laid mains, and that indicated that that pavement was disturbed, and beyond

those two I did not go. In the case where I had no record to show that there was pavement in a street at the time our main was laid, I included no allowance, and in a case where I did not know the exact date that the main was laid, I made no allowance.

By the Master:

This does not pretend to be a complete record of the amount of pavement paid for or disturbed in laying the mains of the company. I have included the reproduction cost covering only these elements that you have indicated without prejudice to the company's rights as to the larger amounts elsewhere. The figures I have set forth for pavement does not represent the reproduction cost as of June 1, 1923, of all of the pavement which was disturbed by the company in the laying of its mains.

I made an estimate of the cost of reproduction of the pavement over all of the plaintiff's mains as they were on June 1, 1923. I ascertained the various kinds of pavement which existed over the mains of the plaintiff company on June 1, 1923 from specified published official records of the City of New York showing the kind of type of pavement in each street. Having ascertained the quantities of the several kinds of pavement existing over the mains of the plaintiff company on June 1, 1923, I multipled the quantity by the market price of the various kinds of pavement as of June 1, 1923, and arrived at the reproduction cost. I set forth in a footnote the amount estimated by me to represent the reproduction cost of the pavement over mains existing on June 1, 1923.

The amount given on these two schedules for employees [fol. 649] and public liability insurance is computed on a basis of the tariff rate for that class of risb and that kind of work, as of June 1, 1923.

As to the cost of permits in the Borough of Manhattan as shown on these two schedules, the basis of that is the actual amount charged permit by the Borough President of Manhattan as of June 1st, 1923. The City inspection is my judgment as to the number of inspectors that would be assigned to work of this character by the Department of Wasted Supply in Manhattan and the Bronx and by the

Borough Presidents of Manhattan and the Bronx. We have had a great deal of experience with those city inspectors, the number assigned by the Borough Presidents, and by the Department of Water Supply of the City of New York. This estimate is my judgment based on that experience. In my estimate of the time for inspection I figured it would take two years to conduct this work of constructing the mains. That is the shortest period in which work of this magnitude could be economically executed. If it were physically possible to construct these mains in a year or a month or in a lesser period of time, it would not change the figure which I have given as the reproduction cost as of June 1st. I have made an estimate as to the number of inspectors which would be assigned by the Department of Water Supply of the City of New York for a given mileage of mains.

By the Master:

I have taken a much less number of inspectors because this is a work of much greater magnitude. Absolutely, it is less than, in my experience they have assigned.

By Mr. Ransom:

I have assumed one inspector every 30 miles of main from the Department of Water Supply, and one inspector for ten miles of main by the Borough President of Manhattan [fol. 650] and the Bronx. Our experience has been that more inspectors were being assigned than I have taken in this appraisal as of June 1st.

The rate on employees in public liability insurance which I have figured in my total labor cost is 4.185 on the mains and 4.18 on the services as of June 1, 1923.

I have excluded from my appraisal, both of these two schedules, the various items of undistributed structural costs as stated on the bottom of my schedule.

The paving which our records showed was actually disturbed when the services were laid or the paving which the city records showed existed in the street at the time the service was laid was the kind of paving I have assumed over the services to be.

By the Master:

Where I found no record in either place, I included no charge for paving.

By Mr. Ransom:

I have also estimated the reproduction cost of all the pavement over services existing on June 1, 1923, and have shown that in the footnote of this proposed exhibit about services. I have included only the paving over services where I found an actual record of the disturbing of the paving.

These two statements with respect to mains and services, respectively, are a true and correct statement of my inventory and appraisal of each main and the services of the company as of June 1, 1923.

From this constant daily inspection of the mains and services of the Consolidated Gas Company, I found their condition during the years 1922 and 1923 and at the present time as efficient as to operating condition as if new. [fol. 651] They are well maintained and replacements made when needed.

The reproduction value as of March 1, 1924, figured on the same quantity of mains, in exactly the same manner as I have testified to, for this appraisal, would be approximately $5,000 higher March 1, 1924, than on June 1, 1923, that is, applying to the same quantities the unit prices and the other factors obtaining as of March 1, 1924.

(Schedule entitled "A Reproduction cost of Labor and Materials necessary for the laying of the mains of the Consolidated Gas Company as of June 1, 1923," except the last note which refers to the reproduction cost of pavement over all the mains as of June 1, 1923, received in evidence and marked Plaintiff's Exhibit No. 268. The excepted portion was marked Plaintiff's Exhibit No. 269 for identification. Similar Schedule in relation to services, received in evidence and marked Plaintiff's Exhibit No. 270, and excepted portion marked Plaintiff's Exhibit No. 271.)

Cross-examination by Mr. Donnelly:

I have been general superintendent of the Department of [fol. 652] Mains and Services of the plaintiff company

since February 1, 1915. I began my association with this department of the plaintiff company on January 1, 1910. I entered the plaintiff's employ in 1904. In 1904 I worked that summer and went to college and then the next summer I worked with the Astoria Light, Heat & Power Company, and went back to college, and next summer in 1906, I worked on the holders at 63rd Street, and then, instead of going back to college that year, I went to the Westchester Lighting Company. Also, I have been three years with the Degnon Contracting Company as Assistant Engineer. Those three years ended January 1, 1910. My work is civil but my course was mechanical at college, and I have been licensed by the State of New York as a licensed, professional engineer. My father had charge of the Department of Mains and Services for the Consolidated Gas Company from 1889 until his death in April, 1913, and Mr. E. R. Jourdan was in that position for about 18 months before I succeeded him. I perform services for the gas companies [fol. 653] affiliated with the Consolidated Gas Company as well as for the Consolidated Gas Company itself, and those services have to do with the work of my department; the Department of Mains and Services. That condition has existed since 1910. I do not keep any record of the time devoted by me in the performance of service for the gas companies affiliated with the Consolidated Gas Company or for the time devoted to the Consolidated Gas Company. I do not turn in any reports to the Accounting Department of the respective time devoted to the Consolidated Gas Company and to the service of one or more gas companies affiliated with the Consolidated Gas Company. I do not keep any memorandum of the time devoted by me to the service of the gas companies affiliated with the Consolidated Gas Company. It is not possible for me to do that. It would be necessary for me to keep track of every telephone call that I get from every one of the superintendents. In the performance of the work of the gas companies affiliated with the Consolidated Gas Company, that work includes the laying of mains and services, and has included that kind of work since 1920—right after the war. As to the main laying, since 1919 and 1920, if you eliminated the Westchester Lighting Company, it would be about a fifty-fifty proposition, because all the mains laid on the subway—practically all the mains have been laid in 1918 and 1919. I

have done considerable extent of main laying in the Borough of Manhattan for the Consolidated Gas Company since the 1st of January, 1922, and since the 1st of January, 1920—four or five miles of new installation. And since January 1, 1920, I cannot tell you offhand how many miles have been laid in the Borough of the Bronx and the Borough of Queens. It is a good deal more than five miles of mains, if you exclude from the Consolidated laying the subway mains. I cannot tell you how many miles of mains have been laid in the Borough of the Bronx and Queens, respec- [fol. 654] tively, in 1922. My salary of $10,000 is paid by the Consolidated Gas Company. I have been paid the annual compensation of $10,000, since the 1st of January, 1924. Before the 1st of January, 1924, it was $8,000. I have no knowledge whether any apportionment of my annual compensation which is paid to me by the Consolidated Gas Company has been made between the plaintiff company and any of its affiliated gas companies.

In the making of contracts for the purchase of pipe, my part consists in determining the quantity required, usually for the period of a year, though conditions might be such that it would not be considered practical to buy for a whole year. When I make a determination of the company's requirements for the ensuing year for the pipe depends on whether we had used up our pipes or not, but it is usually in the latter part of the year, along towards fall. That is the general practice and I send that figure to the purchasing agent, with a request to obtain bids. Mr. Macklin is the purchasing agent, or I sen/ it to Mr. Knowles, who is his assistant. The purchasing department will then request various pipe foundries for bids, will receive such bids, and send them up to me. The invitations for submission of bids are extended by letter and by telegram, and sometimes by a telephone call confirmed by letter or telegram. The usual foundries communicated with in that manner would be the United States Cast Iron Pipe & Foundry Company, the Warren Foundry and John Fox. Those are the three foundries that would supply the local market. The United States Cast Iron Pipe & [fol. 655] Foundry has its nearest foundry at Burlington, New Jersey. They have also foundries at Chattanooga, Tennessee, Anniston, Alabama, and Scotdale, Pennsylvania. The John Fox Company are the agents for the Donaldson

Iron Company at Emaus, Pennsylvania. The Warren Foundry Company is at Phillipsburg, New Jersey. The Florence Company, which is a subsidiary of R. D. Wood & Company, have had some business of ours—not much lately, and the company has not purchased any pipe from that concern recently, nor has the Consolidated Gas Company recently invited that company to submit any bids for pipe.

[fol. 656] New York, March 19th, 1924.

Met pursuant to adjournment.

COLIN C. SIMPSON, a witness on behalf of the plaintiff, resumed the stand.

Cross-examination continued by Mr. Donnelly:

On my direct examination I stated that these prices that I have given here are based on the average conditions as to mains and services in Manhattan and the Bronx. These conditions would affect the material as well, in this way—that in some portions, we will say, of the Bronx, on some one street you might be able to lay a main perfectly straight without any specials outside of the drips and other things, while on another street you might have 15 or 20 per cent extra of the total weight of iron in specials because of the sub-surface structures and other things that happen to be in that street. I have taken an average condition for the whole Bronx where Consolidated mains exist and an aver-[fol. 657] age condition for the whole of Manhattan. The same elements would enter into what you call average conditions in Manhattan. To determine what were average conditions, take for an illustration the proposition of specials used on mains; they are included in materials. I took a great number of mains that we had laid in various sections of the Borough of Manhattan for a long period and found out the percentage of specials as compared with the percentage of pipe used in there. Then I also examined the mains that we had under ground but had not laid at that time, to see what specials had been added since. That examination covered the whole borough, that is, they were spotted around enough so that they gave an average

condition for the whole borough. The labor is chiefly affected by the rock excavation. Now in the northern section of Manhattan there is considerable rock, in the southern section south of 23rd Street roughly there is practically none. [fol. 658] But if you were to take all the excavation for all of the mains and make that one total figure, and then take all of the rock excavation that you would have, in all that excavation, the rock would come to ten per cent of the total excavation. Now, I have used ten per cent rock excavation as the average figure for all of the mains. Specials is nine per cent of the total weight of the pipe, and I figured that to be the total amount of specials on the total main footage. Services are long and short. You may have a service in some cases running from a main on the north side of the street to a building on the south side. That might be 40 or 45 feet or 50 feet long and another service might be 27 feet long. I have taken an average length of services of 30 feet. In other words, if you were to figure each service individually, each one would have an individual length and it would make an interminable calculation. The average conditions that affect the services are based on the length; that is about the only element that affects the service, so far as the average is concerned. Rock has not been considered in the service laying, as most of that rock would be excavated when the mains were laid.

Advisory supervision over all the main and service operations of the gas companies in the Bronx, Westchester and Queens affiliated with the Consolidated Gas Company consists in matters of general policy, as a general proposition, as to the type of distribution to be extended into new sections, whether high or low pressure, the kind of material to be used, and in specific cases the size and material of the [fol. 659] mains. I am consulted generally about all the matters at large. As to whether a six inch main will be run on such and such a street in Larchmont, that might or might not be brought to my attention. If there was anything special concerning that six-inch main it would be brought to my attention. Mains have been laid and services installed by those gas companies in those sections since January 1, 1922, and prior thereto. I will say that since January 1, 1922, mains and services have been laid. The Public Service Commission reports for each of those companies,

which I assume is available to you, will cover that. My supervision was general, as I have indicated before and not specific on any one main or any one service, insofar as those companies affiliated with the Consolidated Gas Company are concerned. Insofar as those gas companies affiliated with the Consolidated are concerned in speaking of the laying of mains and the installation of services for those companies, I did not have direct charge of the main laying in each of those instances. My supervision was only insofar as matters of policy were concerned, as to size, kind of material and location. I was present at the time the mains were laid and the services were installed in those sections, but not when all of them were laid. I would not say my presence upon those occasions was a frequent occurrence; in the Westchester Company probably twice a month, in the Bronx Gas and Electric Company and the companies in Queens more often than that, once or twice a week, maybe. I had supervisory charge only of the physical work of the [fol. 660] laying of the mains and the installation of the services in Westchester, the Bronx and Queens. I do not have to go there at the time the work is in progress. I do occasionally, but my presence is not considered absolutely necessary to the progress of the work. My presence at the time the physical work is done is infrequent in Westchester. With reference to the Bronx and Queens, my presence there is more frequent than in Westchester. I go to the Bronx Gas and Electric Company once or twice a week and the New York and Queens Company maybe as many times as that. I am speaking from the time since January 1, 1922, when mains have been laid and services installed in the Bronx and in Queens, and the same as to the Standard and Northern Union. With reference to the New Amsterdam and the Standard companies the main and service work is done by the same organization that does the main and service work for the Consolidated Gas Company and I have direct supervision over that organization. With reference to the Central and Northern Union Companies the organization is not the same, but I have direct supervision over the repairs of the mains and services. By direct supervision, I mean that the superintendent in charge of that work takes his orders from me and he reports to me. I had direct supervision in that the superintendents in Manhattan in

charge of my three street department branches and the superintendent in charge of the Central and the Northern Union mains in the Bronx,—all of these superintendents report direct to me and receive orders from me as to the work to be done. I recommend the repairs, and see that the physical work is done when the repairs are made. I can not tell you how frequently that has been since January 1, 1922. [fol. 661] It is since January 1, 1922 I have been constantly engaged in the recommendation of repairs to the mains and services of the companies that I have named and likewise constantly engaged in seeing to it that the physical work of repairing those mains is done, except that my direct connection with the Central Union and the Northern Union companies started on December 1, 1923. It was part of my duty to have advisory supervision over repairs to mains and services of the Central Union. I did not make any report or reports to anybody connected with the Consolidated Gas Company giving the time devoted by me to the laying of the mains and the installation of the services and the time devoted by me to the mains and services and I did not keep any memorada of those operations. The biggest job of main laying that I have had for the Consolidated Gas Company or any of its affiliated gas companies since January 1, 1923, was the six miles of 20-inch main laid from the Kingsbridge holder north, in 1922 for the Northern Union Company. In that period that is about the only large job we have had. The work was done from the Kingsbridge holder north, north on Sedgwick Avenue and into Broadway and north on Broadway in December 1922. We started in April and finished just before Christmas. We finished December 1st to be exact. I had direct charge of the performance of the work in connection with that job, which was done by our organization, under my direct supervision. I recommended the laying of that main.

When the bids, which were invited for pipe, come in they [fol. 662] go to Mr. Macklin, head of the purchasing department. They are brought up to me when they are received. The original determination for the recommendation as to purchase of pipe is made by me. The executive committee makes the award of the contract. I do not know who the executive committee are. I have been with the company since 1910. The executive committee of the Board of Trus-

tees is what I mean. I know who some of the executive committee of the board of trustees are. In the matter of these bids I deal with the vice president in charge of purchases,—Mr. C. G. H. Thomas. The bids are sent from him to the executive committee. He gets the recommendation to purchase from us, which contains the bids received and all the data as to it, the recommendation that the pipe be purchased from so and so, and transmits that to the executive committee. I am not called into consultation, the executive committee has never yet thought that it needed to consult with me. I make a recommendation to purchase after the bids come in. My recommendation includes the recommendation as to the one with whom the order for the pipes shall be placed.

The nearest foundry of the United States Cast Iron Pipe & Foundry Company is at Burlington, New Jersey. The freight on pipe from Burltington, N. J. to New York is $2.60 a ton as of June 1, 1923. On January 1, 1923, I believe it was the same and I believe it is the same now. The other foundries connected with the United States Cast Iron Pipe [fol. 663] & Foundry are at Chattanooga, Tennessee, Anniston, Alabama, and Scotdale, Pennsylvania. The freight from Scotdale is $4.50 as of June 1, 1923, and I believe it was the same on January 1, 1923. I don't know of any change since then.

When pipe is ordered we have inspectors at the foundry who inspect every length for us. The inspectors are furnished by the firm of Frederick De P. Hone & Co., inspecting engineers. They do the inspecting at the foundries. Those men are not hired by the Consolidated. The firm is retained by the Consolidated and the inspectors are paid by their firm and billed to us.

I don't recall whether any pipe came from any of the foundries of the U. S. Cast Iron Pipe & Foundry Co. from Anniston, Alabama, but it is quite possible that it had last year, because the pipe was shipped from all over the map to us, that is to say from places other than Anniston, Alabama, but the freight rate was not charged from those places. We paid whatever the contract price was. If any pipe came from Anniston, Ala., the price was f. o. b. Burlington. On the contract we have at the moment, the freight rate which we pay is the freight

rate from Burlington to New York, regardless of where the pipe comes from. The John Fox company has a foundry located at Emaus, Pennsylvania. The freight rate from there to New York is $2.70 as of June 1, 1923 and I know of no change since then. Besides the U. S. and John Fox Company, the company orders pipe from the Warren Foundry Company at Phillipsburg, N. J., just across from [fol. 664] Easton, Pa. That is the only foundry that the Warren Company have. With reference to Burlington, Phillipsburg is across the Delaware River from Easton, Pa. The freight on pipe from Phillipsburg, N. J., to New York is $2.60. The freight rate was not any higher on January 1, 1923, as compared with June 1, 1923. It is not a fact that within the last two years the Consolidated has not bought pipe from any concern except the United States Cast Iron Pipe & Foundry Company, because we bought some from the John Fox Company and from the Warren Foundry.

For the past two years the pipe requirements covered the requirements of the Consolidated as well as the requirements of each of its affiliated gas companies, and by pipe I mean pipe that is used for the laying of mains and the installation of services. The pipe is bought under a contract which covers the requirements of the Consolidated and its affiliated companies in Manhattan, for one contract, and then the affiliated companies make separate contracts under the prices which we have secured, for the quantity of pipe we have indicated they will need. In Manhattan all the work is done by one street department and all the pipe is bought on one contract for the companies in Manhattan; the pipe the other companies may used is billed out to them. In the Bronx, the Central Union Company, will we say, need a thousand tons of pipe. We have secured the general price that they will pay, they make a separate contract at that price for a thousand tons of pipe. The Northern and the other companies do the same. There are two other gas companies in Manhattan besides the Consolidated,—the Standard [fol. 665] and the New Amsterdam, and the contract covers the requirements of the Consolidated and those of the Standard and the New Amsterdam. The last contract was made in December 1923, for the requirements of the

year 1924 of the Consolidated, Standard and New Amsterdam, and the other companies as well. The contract to cover the 1924 pipe requirements for the Consolidated, the Standard, the New Amsterdam and the other gas companies affiliated with the Consolidated was made with the United States Cast Iron Pipe & Foundry Company. The pipe covered in the contract made for the 1924 requirements of the Consolidated, the Standard and the New Amsterdam was something between 3,500 and 4,000 tons. That pipe runs from four inches to twelve inches inclusive, but there were some 24 inch in as a rider on the order and I am not sure whether that was ordered or not. This was all cast iron. The wrought iron pipe was purchased either from A. M. Byers of Pittsburgh or the Reading Iron Company. There was no steel pipe ordered for Manhattan. The wrought iron pipe included the service sizes 1-1/2 inches up to six inches, inclusive. There was some steel pipe ordered for the New York and Queens Company, in the service sizes from 1-1/4 inch up. The diameter of the pipe that was ordered for the laying of mains was four inches in the New York and Queens territory. The diameter of pipe ordered for the 1924 requirements and used for the laying of mains in Manhattan, was 6, 8 and 12. Cast iron pipe is bought by the ton, wrought iron and steel pipe is bought by the foot. I testified that the pipe is bought according to the specifications of the American Gas Association. The speci- [fol. 666] fications are included in this book of 55 printed pages, (handing book to counsel). The specifications for gas mains of four inch diameter vary from the specifications that relate to a gas main of 12 inch diameter, only insofar as the four inch is shown specifically in these specifications as to its thickness of wall, internal diameter, bell thickness and bell section and so forth. The specifications of the American Gas Association were adopted in the period 1911 or 1912. I was familiar with whatever specifications were in use prior to that time, insofar as our own company and the gas companies affiliated with the Consolidated were concerned. There was very little material difference prior to 1912. The lengths of the pipe do not vary as the diameter of the pipe varies. All pipe is made to lay 12 feet and that is universally true of all pipe that is used for gas main lay-

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ing, insofar as our own company and the companies in the Metropolitan area are concerned.

By the Master:

Pipe made of all kinds of material do not come in 12 foot lengths. Wrought iron pipe comes in random lengths, anything from possibly 14-1/2 to 15 to 22 feet, and steel does also.

By Mr. Donnelly:

The pipe that is used for the installation of services is not of uniform length. Cast iron pipe is not used for services, except in very large installations you may have an eight inch service. Where you use wrought iron pipe for the installation of services the length of pipe is from 14½ to 22 feet, depending upon the length of skelp they happen to have at the mill. With reference to the steel pipe, the material is made in exactly the same [fol. 667] manner, the same random lengths. The contract for the 1924 requirements was made in December, 1923. The contract for the 1923 requirements for the same companies was made sometime during the winter of 1922-1923, it might have been any time from the middle of November, 1922, to the early part of January, 1923. That is the time of the year we are now making contracts, because we have exhausted our stock. For two or three years it has been the custom to make a contract for mains and services. During the war period pipe was bought on pretty scant margin. In the fall or late fall of the year you are in the best position, and that is about as long as you can wait to get your stock in for the next year. Insofar as determining what you are going to need.

By the Master:

You wait as long as you can and find out as much as you can about next year, make the best guess you can and then order the pipe on that basis.

By Mr. Donnelly:

There is no time when pipe is most favorable as to price. Based upon a number of years experience as the one who has charge of the mains and service department of the Con-

solidated Gas Company, I am not able to say, although I wish I could, what is the most favorable time of the year in so far as obtaining the best price is concerned for entering into a contract for pipe. From my experience I would not say that November or December of the year is the most favorable time for making a contract in so far as obtaining the best price is concerned for pipe. I will say this to straighten out the question, that the pipe foundries at [fol. 668] one time found that they were being slack with work in the winter, and wanted to even up their load, and endeavored to make a little attractive price to gas companies and others to purchase for the winter months, and in that way prices had gone down a little, but the people tell me now that they are just as much swamped in the winter time as in the summer time.

In so far as the war is concerned, I was in it myself and I can only say from my hearsay. In so far as the period before I entered the army and after I came out, the pipe could only be manufactured when the foundries could get permits for iron. We were doing practically no work and pipe was just bought a few pieces here and there.

As to what has been the custom of the Consolidated Gas Company with reference to the season of the year when a contract was made for the purchase of pipe, as I have indicated, we wait as late as we can in the winter time for the next year's business, depending on the stock we have on hand, but that, of course, would not cover requirments for large mains or other needs that may come up in the meantime.

The pipe that was purchased for the 1922 requirements did not vary in any respect from the American Gas Association's specifications and the same thing holds true of the pipe for 1923 and 1924. I cannot tell you how much of the pipe that was purchased for the 1923 requirements was used for laying mains and installing services in Manhattan and in that part of the Bronx served by the Consolidated Gas Company.

[fol. 669] During 1922 and 1923 there was probably more pipe laid for new mains in the Bronx than there was in Manhattan, but in so far as repairs and alterations are concerned, there was considerably more pipe used in Manhattan than in the Bronx, for repair work and relocation, both

as to mains and services. In 1922 and 1923, in Manhattan, the 41st and 42nd Street crosstown subway was going on and it is now; the 14th Street subway was just being completed, and there was a little pipe work being done on that. There was practically none in the Bronx during that period. The 41st and 42nd Street subway is seven-eighths of a mile long. The subway construction there did not necessitate the relocation of all our pipes, for the reason that some of that subway runs in a tunnel along the library and under the park; where it is shallow, it necessitates the by-passing of the mains. The subway construction work in 14th Street was from the East River to Sixth Avenue, and at the Third Avenue and various other intersections, there were mains being changed and relocated. There was a water main put through last year in connection with that subway. That subway construction is completed as far as the doing of any work by the Gas Company is concerned. The Island of Manhattan, including Marble Hill, which is separated from the Island by the Ship Canal, is the territory in which are located the consumers of the Consolidated. Marble Hill is that portion of Manhattan bounded on the south by the Ship Canal and the west, north and east by the line of old [fol. 670] Spuyten Duyvil Creek, which is the Bronx-Manhattan Borough boundary line. The mains of the New Amsterdam (including the East River Company) and the Standard are located roughly from 13th Street to 135th Street, from River to River.

The price at which the cast iron pipe, diameters 6 to 12 inches inclusive, for the 1924 requirements of the Consolidated Gas Company, the Standard, and the New Amsterdam and affiliated companies, was purchased from the United States Cast Iron Pipe and Foundry Company was $63 per net ton, including freight. These 3,500 to 4,000 tons for all companies. For Manhattan there may have been an odd case, occasionally we buy an odd size, like 18 inch, that we use once in a while. There may have been some of those few odd cases and an odd piece of 30 in there, but it was bought at the same price and the bulk of the order was 6 and 8 and some 12 inch. It is being delivered throughout this year, as we can get it. I told the general sales manager of the United States Cast Iron Pipe & Foundry Company the other day that I would take all they could give me and

I do not think more than a quarter of the order has been delivered, and we are just practically a little over half through the month of March, 1924. In Manhattan, we have been using it for repair work right along. The price paid to cover the 1923 requirements of the Consolidated Gas Company and its affiliated gas companies was $56.10, purchased from the United States Cast Iron Pipe & Foundry Company. I believe that the price covering the 1922 requirements was $41.10, but would like an opportunity to check up; the sizes for the 1923 requirements are the same as those purchased for the 1924 requirements, outside of small orders for largeer sizes. The sizes for the 1922 requirements were not the same as for 1923 and 1924. In 1922 there was six miles of 20 inch but the bulk of our business [fol. 671] is in the standard sizes of 4, 6 and 8 inches. Those have been standard sizes for 15 or 20 years.

In contracting for pipe requirements the contract may cover the specials; not always, of course at a different price, but the valves are never covered in the pipe and specials contract. They are made by valve manufacturers and not be pipe manufacturers, so that the valves are the subject of a separate contract. The valves for the 1922 requirements were purchased from the Ludlow Manufacturing Company, who are located out of the city with selling agents at the office of Millard F. Smith Company, in New York. I cannot tell you at what price they were purchased for the 1922 requirements, there is a great variance there as between the different kinds of valves and it would take four or five pages to put that information down.

Special fittings are sometimes the subject of a separate contract and sometimes may be made by the same concern that makes the pipe. In the 1924 requirements some of the fittings, probably 75 per cent, were placed with the original order for pipe, but supplementary orders have to be issued later and they are not always placed with the same foundry, because deliveries of special fittings are very unsatisfactory. Speaking of the 1922 requirements, I do not recall offhand as to whether or not the fittings were purchased from the same concern as the pipe, but as a general proposition that is the situation. The special fittings are uncer- [fol. 672] tain as to delivery because they are hard to make. They are not a standard thing like pipe. There is no special

season of the year when fittings are contracted for except those that are purchased with the pipe orders. You usually have a stock of special fittings much greater in proportion that your stock of pipe, but nevertheless pipe cannot be used for main laying without some fittings. The fittings are used for bends, T's, drips, crosses and they are used mostly at the points where the streets intersect. We have three store yards in Manhattan where a certain quantity of stock pipe is stored, at 17th Street, between Avenue C and D, one at 66th Street and West End Avenue and one at 111th Street and First Avenue. Those three store yards serve in Manhattan, for the Consolidated, New Amsterdam and the Standard, and the same yards are used also for the storage of the specials and the fittings. The pipe is inspected upon receipt there by the storekeeper in the employ of the Consolidated. When the pipe is taken off the truck it is hit with a hammer and you can tell by the ring whether or not it has been cracked inside or not. The pipe does not have to be calipered as to diameter, but the fittings do. A caliper is an instrument like a pair of pliers, for measuring the diameter of the pipe inside or outside. Those have to fit for the corresponding sizes of specials and there cannot be much variance else they would not fit in the street.

[fol. 673] No part of the Bronx is included in the territory in which are located consumers of the Consolidated Gas Company. The Consolidated Gas Company has mains in the Bronx roughly from Fordham Road on the north and Southern Boulevard on the east—Fordham Road from the Harlem River over as far as Decatur Avenue. One runs to Decatur Avenue and another one branches out to Southern Boulevard. Another main of the Consolidated Gas Company *is* located in the Bronx is the 48-inch transfer main located on 134th and 139th Street——the two branches. It is on Locust Avenue and runs north on Morris Avenue, and then works over northwest until it gets to the Kingsbridge holder finally on Fordham Road.

With reference to Plaintiff's Exhibit 268, which is my inventory and appraisal of mains, the eight-inch mains are located in the Island of Manhattan and distributed all over the Island. In the Bronx, there are 9,935 feet of 8-inch main, in the section bounded on the south by 138th Street

at St. Ann's Avenue and running north and then including some of the streets east and west of St. Ann's Avenue. The Consolidated Gas Company's own employees lay its mains and install its service*r*, and that has been the custom at least since January 1, 1922, and for some time prior to that, except that in cases of some very large mains we have occasionally contracted them out. The six miles of 20-inch main was laid under my immediate supervision and was laid half by the forces of our own company and half by a Bronx contractor, the Palidino Contracting Company. The [fol. 674] people working for Palidino did the excavation and back filling, we did the pipe laying and caulking.

Since January 1, 1910, the Consolidated Gas Company has laid 425,000 feet of mains, in Manhattan and the Bronx, possibly 12 or 13 miles in the Bronx, and the bulk of it in Manhattan. Something between five and seven miles of that 425,000 feet was laid since January 1, 1922. Since January 1, 1922, a portion of that 425,000 feet of main was laid, generally over the Island of Manhattan. The 300,000 feet of mains relocated because of subway construction, in the Island of Manhattan, since 1910, ran generally along the subway routes. It ran from practically the north limit to the south limit of the Island, and there were east and west subways, and generally, covered the island except the northeast and northwest corners. The greatest amount of subway work done which necessitated the relocation of gas mains was during the general period when the dual subway system was started, in 1911, 1912, 1913, 1914 and running right on up through the war. The figure of 300,000 feet was taken from an actual measurement of the mains that were involved in the subway operations. During that relocation, some of the mains were of the gas companies other than the Consolidated Gas Company but affiliated with the Consolidated, and in some cases the work of relocation was done by the Consolidated Gas Company's own employees, but probably the greater bulk was done by the contractors' [fol. 675] employees, under our supervision, but where it was done by the Consolidated employees the contractor paid for it. Bradley, Degnon, The Underpinning Foundation, Rapid Transit Subway Construction Company, McGovern were all subway construction contractors and their con-

tracts provided for the relocation of our mains. Since January 1, 1922, probably not more than a mile or so of mains were relocated because of subway construction.

The 110,000 openings to which I testified were made in the period 1910 to 1923, inclusive, in the entire Island of Manhattan. Repair, relocation, alteration work runs practically the same each year. I inspected the bulk of them and I have district superintendents under me, whose duty it is to see those openings at least twice per day and report to me. In instances where the openings are made, there is a sketch made of every opening, showing the conditions revealed by the opening itself. There were work tickets and sketches for those openings but I do not believe that they have been preserved as far back as 1910. We have preserved records disclosing the conditions revealed by the openings some probably seven or eight years back from the present date and that would include about 70,000 or 75,000.

By the Master:

The results of these sketches and the conditions found by these openings were either transferred to or checked with the maps.

By Mr. Donnelly:

The number 110,000 was gotten from the number of openings that we had made in the various years for various purposes—repair work, alteration work and so forth. We had that figure for each year. If there is any work on the Consolidated main, when a street opening is made, the Consolidated bears its proportionate share of the cost.

Plaintiff's Exhibit No. 266, which is the main record [fol. 676] book, is a cumulative record. So far as its cumulative character is concerned it is a continuation of a preceding book or other record and I think there are about five other books since November 11, 1884. The entries in Plaintiff's Exhibit No. 266 are in the handwriting of two clerks in my department, and perhaps in my own handwriting. I do not know where the original entries were taken from in the first book beginning with 1884. I have had occasion to consult that first book beginning with 1884 from time to time and in the course of that consultation I have referred

to the entries. I know of no inventory, from personal knowledge, ever taken of the Consolidated Gas Company's mains, aside from the maps to which I have referred in my testimony. Since I have been with the company there has been no inventory of the company's mains, based upon actual physical examination of the mains themselves, that is, the entire uncovering of all the mains.

The three departments of the Consolidated Gas Company's mains and services departments are located at No. 82 Elizabeth Street, 66th Street and West End Avenue, 111th Street and First Avenue. With reference to Plaintiff's Exhibit No. 268, the only mains shown on there are Consolidated Gas Company mains, and the same holds true with reference to the Exhibit No. 270. The mains which are included in Plaintiff's Exhibit No. 268 may be used for the purpose of supplying gas to Standard consumers, to the extent that Standard consumers may be on the Consolidated service. The same thing holds true with reference to the [fol. 677] consumers of the New Amsterdam. I am not able to pick out, on Exhibit No. 268, to which of those things that situation applies.

Map No. 292 which I had before me yesterday would contain data going back to 1884 of the locations of the mains which probably were in existence at that time, and for some years prior to that time. That would not hold true with respect to Map No. 629, because that is a newer section of the city, but on No. 574 it could contain data going back to 1884 and later. There is no data on the map which involves the age of the main or when the main was laid, or anything to that effect. In the case of a main being taken out of service or temporarily disused, a note may have been placed and was in most cases, of the date of such disuse, but there is no such note on any of these three maps. There are 730 odd maps, similar to these, and containing the same general information as to different parts of the territory as is disclosed by these maps. These maps were made up about ten or twelve years ago. The measurements contained on the main maps agree substantially with the measurements contained in the main record book, Plaintiff's Exhibit No. 266. The measurements obtained from the map are slightly [fol. 678] longer in total than the totals in Plaintiff's Exhibit No. 266, not more than two or three per cent, and prob-

ably one per cent. In making up Exhibit No. 268, I used the footages indicated in Exhibit 266. I checked to the measurement shown in the book, Plaintiff's Exhibit No. 266 with the main maps, and, further I checked as to the accuracy of the entries into this book, and the check which was continuously being made as to the accuracy of the information on the mains, with the sketches as they came in, and the original reports sent from the district Superintendents. We check the book against the map, we check the book against the original sources of information, or the signed reports from the district superintendents. And we check the map against the original information, which is the location of mains on sketches. The checking of the book went [fol. 679] back, insofar as the reports were concerned, to about 1895, which is as long as they have been preserved. I think in one district they ran back as far as 1892. That checking was not all done by me personally, but it was done under my direction and supervision. Something like one-half of it was done by Mr. Davidson and Mr. Kingsbury.

The survey of the services is being made by employees in our department. The survey will be continuous until it is completed, it is an enormous task. Judging by the number of buildings visited, it is probably 80 per cent completed; but there is a great deal of other information that is yet to be obtained. That pertains to services in Manhattan only. I do not know whether or not any previous survey was ever made. From 1910 to date, I have seen 30 or 40 per cent new installations and repair work and all kinds of work of that sort on services go in. In speaking of the services that I have seen go in and the services I have seen repaired, I mean services of the gas companies affiliated with the Consolidated as well as those of the Consolidated Gas Company itself.

The signed monthly reports sent me by the district superintendents in the three street department districts are the underlying data for the service book, Plaintiff's Exhibit No. 267. I used Plaintiff's Exhibit No. 267 in making up Plaintiff's Exhibit No. 270. The service entries into this book were checked with the same reports, running back to 1892 in one case and 1895 in another case, with the book. Ex- [fol. 680] hibit No. 267 goes back to January, 1912 and that is likewise a cumulative book. Similar books covering the

periods anterior to 1912 precede that book, and data in those books is made up from the work tickets and reports.

We have been engaged in the work of this appraisal, Plaintiff's Exhibit No. 267, since shortly after June 1st until a few days ago. We began the work of preparing Plaintiff's Exhibit No. 268, which is the appraisal dealing with the mains shortly after June 1, 1923. In the preparation of it, I had the assistance of my immediate assistants in the office, in the arithmetical computations, and the assistance of adding machines, and we were engaged in the preparation of it almost continuously from June 1st, until several weeks ago. I made an affidavit which was used as part of the Consolidated Gas Company's moving papers for the injunction in this case, in which the appraisal was dated as of May 1st, 1923. The appraisal had to be made in a much more hurried manner than this one was made; but certain information contained therein was of value in getting up this present appraisal. I used that in preparation of Plaintiff's Exhibit No. 268 where the prices were the same as of May 1st. I do not recall at the moment whether we used the main mileage as of May 1st, or as of June 1st. We were engaged in making the appraisal which was referred to in my affidavit probably two or three weeks. We were requested to make the affidvait by counsel, Whitman, Ottinger & Ransom, who also requested us to prepare Plaintiff's Exhibit No. 268. During the course of my preparation of this exhibit I have been in consultation with counsel. I was requested to make this appraisal on the [fol. 681] reproduction cost theory as of June 1, 1923.

With reference to Plaintiff's Exhibit No. 268, there is no engineering overhead or general superintendence overhead, no administrative or legal or miscellaneous general expense during construction, nor overheads of that character; but the actual direction of the men on the work by foremen and superintendents over sections is included therein as part of the labor cost. The appraisal is intended to give the complete cost of laying all these mains as of June 1, 1923, as it would cost a subcontractor, without figuring any subcontractor's profit. Plaintiff's Exhibit No. 268 included all of the mains of the Consolidated Gas Company of New York, whether transfer or distribution mains. A transmission main might be considered the actual main on

the street that is supplying the consumers. For distribution purposes it is frequently necessary to carry the gas a long distance from the point of supply to a point of distribution, where it connects with other distribution mains. Both of them are distribution mains. One has services on it, the other has none at all, because it plays into these other mains and they have the services on them. The expression "transmission main" is used synonymously with transfer main in our company. There is no difference in practical reality between the two, except what I gave you as a definition of transmission mains. The mains which go from the place where the gas is made into the holders, if inside the property of the company is a yard connection and it is not [fol. 682] included in my appraisal. The main which goes from the 99th Street plant into the various holder stations is the thirty-inch main and if there is more than one, that is a transfer main. A 48-inch main running to the Kingsbridge holder is a transfer main, but there are other mains entering the Kingsbridge holder which are not transfer mains. The so-called transfer mains are included among the mains on Plaintiff's Exhibit No. 268, and all the mains of the Consolidated Gas Company are in that exhibit. That part of the 8-inch main, which is in the Bronx is a distribution main which serves consumers of the Central Union Company, and the Central Union Company I understand pays a return on that to the Consolidated.

Conditions so far as sub-surface structures are concerned are not the same in all parts of Manhattan. Some parts of Manhattan Island are more crowded with sub-surface structures than others. The avenues contain more sub-surface structures than the ordinary side streets and the streets in the lower part of Manhattan are more crowded than they are in the extreme upper part. You have plenty of sub-surface structures; all that the streets can accommodate in most parts of Manhattan. Anything from 59th Street down would be described as the lower part of Manhattan; take it as half of Manhattan Island. From 110th Street down, extending clear across the width of the Island, the sub-surface structures are very numerous, extending clear across the width of the Island. That condition obtains all the way south from 110th Street to the lower tip of Manhattan Island, growing progressively worse as you

[fol. 683] get downtown. In the side streets near the respective rivers, there are very large sewers running out and into the rivers. The section called Baker Field, now belonging to Columbia, at the upper end of Broadway, along the Ship Canal, is very sparsely settled. The Dyckman Tract is building up pretty rapidly now. There are a lot of big apartment houses up there, but it is not all built up. I know of no vacant land south of 181st Street. The Island north of 181st Street is thickly populated, even in spite of the amount of vacant land that is there. We are sending out nearly a million cubic feet per square mile of gas on the maximum hour up there, which is a great deal.

We have a 24-inch transfer main that runs all the way down to about Beaver and Broadway. That main has its first connection at Chambers Street, so that you might say south of Chambers Street our transfer mains do not run. This main runs through Second Avenue and on several streets on the lower east side, and finally swings around and comes into Beaver and Broadway. The crosstown transfer main, the most southerly actual crosstown main, is on 19th Street and 20th Street, part on each. That is the 30 inch main. There are transfer mains running from the 21st Street plant to the 11th Street plant and from the 14th Street plant to the 11th Street plant. The diameters of the mains are 30 and 24, practically all thirty. There is a short portion twenty-four. There are two mains of that character. We have transfer mains north of 21st Street be- [fol. 684] tween 21st Street and 42nd Street. There is a 30-inch main on First Avenue running from 20th Street to 54th Street, turning east on 54th Street to Avenue A, north on Avenue A, connecting up with the 63rd Street holder station. That same 30-inch main continues on north and connects up with 99th Street, 111th Street, and there is a 48-inch transfer main then from the 63rd Street holder station on Avenue A as far as 93rd Street, west on 93rd Street to First Avenue, north on First Avenue to 111th Street holder station, with a connection to the 99th Street Works. The 48-inch main continues on First Avenue to 114th Street, across 114th Street east from Pleasant Avenue, north on Pleasant Avenue, staggering on several streets until it reaches Second Avenue at or near 122nd Street; north on Second Avenue to the Harlem River, across the Harlem

River to the foot of Lincoln Avenue, across 134th Street, and connects by means of Locust Avenue to the tunnel shaft of the Astoria tunnel. Leaving the Bronx shaft, I should have said, the Bronx headhouse of the Astoria tunnel, it runs up Locust Avenue to 138th Street, west on 138th Street to Walnut, north on Walnut to 139th Street, west on 139th Street to Morris Avenue, and I described the rest of the route of that main this morning. Now, from the 63rd Street holder station, running west, there is a 30-inch main, to 63rd Street, and 65th Street, through transverse road, coming out at 66th Street, and connecting up to the West 65th [fol. 685] Street holder station. Then, leaving 21st Street station, there is a 30-inch main on 20th Street as far as Seventh Avenue, running south on Seventh Avenue to 19th Street, across 19th Street to 10th, north on 10th to 35th, west on 35th to 11th, north on 11th Avenue to 65th Street holder station. It continues on then through the holder station, east on 67th Street to Columbus Avenue, north on Columbus to 110th, east on 110th to Central Park West, north on Central Park west to 111th, east on 111th to St. Nicholas Avenue. There is a 48-inch transfer main that joins the previously described forty-eight inch main at 127th Street and Second Avenue, and runs west on 127th Street, and then 126th Street, Old Broadway, 131st, Broadway, 132nd, to the 132nd Street holder station. There is a 20-inch main from the 132nd Street holder station that runs up Broadway, Amsterdam Avenue, St. Nicholas Avenue, and then again on Broadway, to a point opposite the old Inwood holder station, where it becomes a 30-inch main, and continues on Broadway, Dyckman Street, Post Avenue, 206th Street, Ninth Avenue, 210th Street, and then under the Harlem River to Kingsbridge holder station.

Referring to Plaintiff's Exhibit No. 268, the 48, 36, 30, 24, 20, 18 and 16 inch mains shown on that exhibit are not all transfer mains. We have no transfer mains smaller than 20-inch, but we have distribution mains of the other sizes running up as high as 48-inch distribution mains, from which consumers are served. Referring to the mains [fol. 686] shown on Exhibit No. 268, the mains running from 20 inch up to 48-inch, some are transfer and some are distribution mains. The same condition as to rock encountered in excavation for the laying of mains does not

exist in all parts of Manhattan Island. There is no rock approximately south of 23rd Street—at a point that you would strike it in excavating for gas mains. There is considerable rock on the west side north of 23rd Street, and on both sides north of 59th Street.

By the Master:

That territory where rock is encountered would be the most expensive, in so far as excavation is concerned, but there might be extra excavation work required at points south of that, due to sub-surface structures, that would far exceed the cost of excavating rock. The most expensive section to lay mains would be almost anywhere south of 59th Street. Certainly the worst possible spot you could pick out would be any avenue south of 23rd Street, but the presence of those sub-surface structures may make it impossible to lay the main, unless you move them all.

[fol. 687] In other words, you may come to a condition where you have three or four duct banks lying one above the other, and the only possibility is to make a place between them and put the main through. Now, of course, in this appraisal I have not figured that, for the reason that the main is there, but you are asking about present time construction, and that would be the case. In taking these two duct lines out, you might have to go back a block and pull cable. The worst place in the City if you were to take one spot representing the maximum figure which I would use for laying mains, would be William and Wall Streets. A section where considerable work might have to be done, and which would represent a condition which would exist for some considerable distance, is Third Avenue from practically one end to the other.

By Mr. Donnelly:

Third Avenue is very bad.

By the Master:

The cost of laying mains in Third Avenue would exceed what I have called average conditions. Any side street in the section from probably 42nd Street to 110th Street on the west side would most nearly represent what I call aver-

age condition. There is the average amount of rock, and the average amount of sub-surface structures. Ten per cent of the total excavation would be rock, and as to specials, they are figured on the weight of the pipe. If you have 100 [fol. 688] pounds weight of *of* pipe, our experience is that you will have nine pounds of special castings. The average amount of specials would prevail in that section. It certainly did prevail on the 20-inch main that I laid in that section some years ago. I have taken cartage at the best possible figure I could make for that. I would figure all trucking of pipe at night, and not attempt to truck it in the daytime in the city; and the traffic conditions would, in a way, affect your excavation, but I have not taken that seriously into consideration. The underground structures affected the number of specials, and it affects your excavation for the reason that it is difficult to excavate around a nest of underground structures, as compared with taking clean earth out in the open. That condition of underground structures would also prevail in what I have given as average territory.

By Mr. Donnelly:

There were mains laid, south of 59th Street, on Washington Street within the past two years—about four or five blocks. Practically half of the mains that have been laid, have been laid south of 59th Street, running down to the Battery, in scattered sections—a block here and there, or two blocks at another place. Within the last two or three years mains have been laid along Third Avenue, either north or south of 59th Street; 6-inch mains were laid at William and Wall during the construction of the subway, by a contractor. That was finished up two or three years ago, I think perhaps before 1922.

The percentage of 10 per cent of rock excavation in Man- [fol. 689] hattan was determined from an actual survey of rock conditions on the Island made by myself and my assistants and also by taking published rock data, and data of all kinds as to rock and elevation, published by the City and by the Geological Survey; data obtained from contractors' cuts, where rock was exposed, data obtained right on the street where the rock can be seen. It is everything from a hard blue rock to up in the Dyckman section there

it is sort of hard sandstone-powdery limestone. It is quite difficult to excavate, although it is quite soft. This rock in the Dyckman section has to be removed with a pick. It is very difficult to blast it and get it out properly. It will not hold the powder; it just blows out. When it is removed by pick, it is a longer process than removing it by blasting, but not in the case of that kind of rock. Picking is the cheapest kind of excavation for that kind of rock. Of course, that is on trench work alone. If you had a cellar to dig, it would be different. Some of this rock is called gneiss. In excavating trenches for the laying of mains on Manhattan Island ordinary loam, filled-in ground, ashes, and a few small boulders are encountered. The filled-in ground is along the edges of either river, between the point where the old river line was and the point where the city filled out the Island, in some cases up around Second Avenue in the 90's, I think it runs in a couple of blocks. In some cases less than [fol. 690] that. On the west side it may run back as much as two blocks in the south section. Of course, above 59th Street you have rather high ground; that is, the original soil is there. In those locations where the ground is filled-in ground, it is somewhat moist along West Street, and along First Avenue in the 90's and 100's, up by the Harlem Market, and in some cases over by the 11th Street plant and around there the ground is rather moist with tidewater. That condition of moist ground does not exist all along the westerly frontage of the Island. I should judge not much north of 23rd Street. On the east side, if you take the marginal street all the way up, you can excavate down anywheres from two to two feet six inches in depth and you will hit moist ground from the tidewater and it might be a little more than that, and west, in some cases a block and in some cases, on the north end of the Island, two blocks. In speaking of marginal street I mean South Street. Running up along the east side of the Island, in a northerly direction—there is South Street, Avenue D, Water Street, and there is Avenue A and First Avenue. In any case the street or avenue which follows the river front and it may be one more further west, usually has wet soil, and this wet soil continues north all the way up the Harlem River, and runs backwards from the river front not any further west than Second Avenue. There is some high ground where the

[fol. 691] breweries are. Speaking of the other parts of the Island, the character of the ground encountered is hard, in general. There are a few points where, near Central Park, for instance, on the west side, from Central Park west for about half a block back, where these lakes exist, there is a fill of rock that has been made there apparently to level off the street, and there is quite a little water throughout that. We have mains on the streets north of 59th Street, west of the park, for instance, which is chiefly noticeable around 100th, 101st and 102nd Streets, throughout that section.

The company has official books which show payments made for pavement disturbed in the laying of mains. It gives the fact that, in laying the gas mains at a certain place at a certain time, it was necessary to pay so much for a certain kind of pavement over the main when it was laid. The records of the company run back, I understand to 1884.

I have not laid a distribution system of the size proposed on Plaintiff's Exhibit No. 268, or 980 odd miles of main—5,000,000 and odd feet. There is a difference of $5,000. between the price of labor and material as of June 1, 1923, mentioned in Plaintiff's Exhibit No. 268, and March 1, 1924. Caulkers have gone from $8 to $9 a day; cast lead has gone up, yarn has gone up; street paving has increased very greatly, and sidewalk paving has gone up about 25 per cent, [fol. 692] since June 1, 1923. There was some difference between the prices for labor and material in the laying of mains between May 1, 1923, and June 1, 1923. There was an increase in cast iron pipe prices in that period. Steel, lead, wool, paving have increased in price since June 1, 1923. Specials have decreased in price. I have averaged the prices prevailing as of June 1, 1923. The expression "specials and fittings" are synonymous. There has been a decrease in the cast iron pipe since June 1, 1923 for some sizes.

By the Master:

We buy cast-iron pipe on a weight basis, for standard sizes, but there are times when a certain size will carry a premium. There are times when a certain size will be cheaper than another size. It is a proposition for the foundry to bargain with the company and, on their side,

it is a proposition as to what they can make. If you go to them and want a six-inch pipe and their pits are all filled up with 6-inch, they cannot make 6-inch pipe in 24-inch pits without going to considerable extra expense. On the normal run through the foundry if they can get the sizes the way they want, they will make you a standard price on pipe from six to twenty-four inches.

By Mr. Donnelly:

Our contract for pipe may be for a year's supply, but sometimes we are not able to anticipate all our requirements, and may have to buy again during the year. Speaking of the 1924 requirements, the demand for gas in a section might have increased to such an extent that it might be necessary to lay a large distribution main in that section, and that demand could not be anticipated in December [fol. 693] of 1924, because the maximum demand for the year did not arise until some time after the pipe had been ordered. I keep in touch with conditions that inform me as to what the company's requirements for the ensuing year will be, but some builder may cut up some of those old estates in upper Manhattan, that may require the laying of a mile of main. The builder has to file his petition with the Building Department before he gets his buildings up, and then some time elapses before the buildings are erected. I do not think any pipe was bought for the year 1923 requirements outside of regular requirements for that year for the Consolidated Gas Company. There was some bought for the subsidiary companies.

The materials which enter into the laying of gas mains are cast iron pipe, specials, lead or lead wool, yarn blocking and lumber for sheathing, cement —all the different materials that enter into pavements and a great many incidental and miscellaneous materials, such as kerosene, soap, soap bandages or stoppers, bed blocks, red lead, including timber shoring. Valve boxes come in our classification as a special. The cast iron valve boxes are set in the street over the valve stem and allow access to the valve for opening and closing.

In the making of this Exhibit No. 268 we used 20 per cent. lead wool and 80 per cent cast lead, the percentage that we have in the street as of June 1, 1923. Yarn is used for mak-

ing the joints. I assumed two by nine timbers where sheathing is used. For the bed blocks, we buy second hand lumber [fol. 694] from builders and cut it up. Of course, you would need, for some of the larger mains eight by eight, or sometimes twelve by twelve timbers for the bridges in sections for traffic over those mains. There is no other use to be made of the timber, except that you have wedges, of course, to hold the pipe on the blocks, made of wood. The sheathing would have to be yellow pine, but for the other lumber—you could use short leaf pine and in some cases you could use a spruce on the bridges, but the second hand lumber could be almost anything. All lumber, except the lumber that is used for the bed blocks, which stay in and such of the sheathing as would have to be left in because it is too dangerous to withdraw it is used twice, on the average, and I have given consideration to that fact in my appraisal. 2 x 9 timber is used for sheathing any size trenches. After the first use of the timber, some of it would be fit for salvage, but, on the average, you can use, out of any 100,000 feet board measure, what is required for 200,000 feet.

[fol. 695] New York, March 20, 1924.

Met pursuant to adjournment.

COLIN C. SIMPSON, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination continued by Mr. Donnelly:

In the preparation of Plaintiff's Exhibit No. 270, which relates to services, I did not assume that the services would be installed at the same time that the mains would be laid. The service would be connected with the main after the gas was placed in the main: you could not do anything otherwise, with safety. The laying of the mains and the installation of the services could not go on as a simultaneous operation; that is to say, as the main was laid a service could not be connected with it before the gas was in the main itself, because you could not purge the main safely with a service connected thereto. You would have to purge the main into the consumers' premises, purge it

of the mixture of gas and air as it goes into the consumers' premises. Some time would have to elapse after main was laid before the service was installed, a time sufficient to permit the purging of the main of its gas.

On Plaintiff's Exhibit No. 270, I have given the sizes of the services but have not given the kind of material in the pipe. I will state for you and the record that it is all wrought iron. All of the sizes are wrought iron except in the case of two of the six-inch and probably one eight-inch service which are cast iron. But the bulk and probably all of the services are wrought iron.

The details which make up my figure $3.738 for material cost per foot of 12-inch main, Number 268, are as follows: A 12-inch cast iron main in Manhattan: Cast iron pipe, $2.545. All these figures are per foot for the pipe. They are dollars per foot: Cast iron specials, $.432; cast iron [fol. 696] pipe inspection at foundry, $.010; lead wool, $.041; cast lead, $.117; yarn, $.018; bed blocks, $.016; wedges, $.014; lumber used, $.261; lumber left in, $.106, making a total for the material of $3.560, to which is added a storeroom charge of 5 per cent, of $.178, making a total of $3.738. The valve pits are not included among the material, nor are there valve pits on the 12-inch main. In the Bronx there are 768 feet of 12-inch mains. The same elements apply to those in the Bronx as apply to those in Manhattan. The 12-inch mains which is in the Bronx is not included in this unit of $3.738, they are shown separately in the left hand column of footings, headed "Quantity of Mains—Bronx—Feet." There is a difference between the figure you have and the figure of 12 inch in the Bronx for $3.441. The details which make up that figure are: Cast iron pipe, $2.545; cast iron specials, $.259; pipe inspection at foundry, $.010; lead wool, $.041; coast lead, $.117; yarn, $.018; bed blocks, $.016; wedges, $.014; lumber used, $.183; sheeting left in, $.074. Sub total, $3.277; store room charge of 5 per cent, $.164. Total material, $3.441.

The price of the material is the same, but the quantity of specials used in Manhattan is greater than that used in the Bronx, that is what makes the difference in the unit cost per foot of that which is used in the Bronx, as compared with that which is used in Manhattan. If you have more

it will cost more, at the same price per unit. The difference in prices for the lumber is in the unit cost, for there is less [fol. 697] lumber required in the Bronx than in Manhattan. The details with reference to labor cost per foot: Unit in Manhattan: Earth excavation and back fill, $1.620; cartage and disposal of excess material, $.056; rock excavation, $.750; pipe hauling, $.062; pipe laying, $.239; caulking, $.131; temporary paving, $.123; extra work, $.509; labor placing lumber, $.285; Sub-total, $3.775; net deduction for overlapping trenches on mains, $.036. A Sub total, $3.739; field supervision, $.187; maintenance and tools, $.075. Making a total of $4.001. There is a difference in the labor cost in the Bronx as compared with the labor cost in Manhattan, for the excavation and back fill is easier, costs less in the Bronx than in Manhattan, although there is more rock in the Bronx, the excavation and the back fill is cheaper per cubic yard for that size of main.

The Master:

Another difference is the cartage and disposal of excess material which is greater in the Bronx because there are longer hauls to get rid of it. The rock excavation is also greater, due to there being 50 per cent. more rock per unit of main in the Bronx than in Manhattan. The pipe hauling is greater, pipe laying, and caulking is the same. Temporary paving, and extra work is less. Labor placing lumber is less because there is less required and used per unit of main.

By Mr. Donnelly:

With reference to the detail cartage and disposal of excess material; when you lay a main of a certain size it takes the place of some material that has been in the ground, you have to get rid of that and get it off the street. That item includes the loading of that material into the trucks, tak- [fol. 698] ing it away and disposing of it at some point. In Manhattan the excess material was hauled to the public dumps; one mile long, average haul. "Public" might not be an exact classification of the dumps, for they *they* are along the river front, maintained by contractors and other parties, who allow the privilege of dumping spoils and

EXHIBITS TO TESTIMONY OF COLIN C.SIMPSON

Consolidated Gas Company of New York

As of June 1st 1923.

Manhattan—Mains

LABOR	48"	36"	30"	24"	20"	18"	16"	12"	10"	8"	6"	5"	4"	3"	2"	1¼"
Excav.& Backfill.... (earth)	$6.700	5.296	4.115	3.413	2.509	2.117	2.041	1.620	1.552	1.483	1.181	1.152	1.127	1.098	.857	.828
Cartage & Disposal (Excess Matl.)...	.816	.464	.328	.214	.152	.125	.098	.056	.040	.027	.016	.013	.008	.005	.003	.002
Rock Excavation.....	3.105	2.445	1.905	1.575	1.155	.975	.945	.750	.720	.690	.540	.540	.525	.510	.508	.390
Pipe Hauling.....	.553	.316	.237	.172	.128	.111	.094	.062	.047	.035	.025	.021	.016	.011	.008	.006
Pipe Laying.....	1.510	1.194	.796	.588	.398	.361	.218	.239	.159	.085	.066	.057	.045	.022	.020	.012
Caulking.....	.760	.600	.480	.435	.326	.261	.219	.131	.107	.085	.069	.053	.046	.043	.040	.037
Temporary Paving....	.298	.281	.228	.211	.176	.158	.158	.123	.123	.123	.105	.108	.108	.105	.086	.086
Extra Work.....	4.559	3.224	1.891	1.272	.852	.767	.678	.509	.424	.169	.127	.107	.085	.021	.022	.017
Labor Plac. Lumber..	1.223	.757	.698	.649	.597	.212	.306	.285	.146	.144	.134	.133	.132	.131	.120	.119
TOTAL.....	19.534	14.577	10.678	8.629	6.295	5.177	4.857	3.775	3.318	2.841	2.253	2.181	2.089	1.966	1.563	1.506
Net deduction for overlapping Mains...	—	.068	.061	.049	.015	.116	.045	.036	.025	.047	.055	.163	.095	.004	—	—
TOTAL.....	19.534	14.509	10.617	8.580	6.280	5.061	4.812	3.739	3.293	2.794	2.198	2.018	1.994	1.962	1.563	1.506
Field Supervision 5%.....	.977	.725	.531	.429	.314	.253	.241	.187	.165	.140	.110	.101	.100	.098	.078	.075
Maintenance of Tools 2%.....	.391	.290	.212	.172	.126	.101	.096	.075	.066	.056	.044	.040	.040	.039	.031	.030
Grand Total.....	20.902	15.524	11.360	9.181	6.720	5.415	5.149	4.001	3.524	2.990	2.352	2.159	2.134	2.099	1.672	1.611
Pavement Inspection and Permits.....	.102	.096	.080	.074	.063	.058	.058	.046	.046	.046	.041	.041	.041	.041	.036	0.36

Consolidated Gas Company of New York

Of June 1st 1923.

Bronx—Mains

LABOR	48"	36"	20"	24"	20"	12"	8"
Excavation and backfill (earth).....	5.274	4.167	3.240	2.685	1.974	1.275	1.167
Cartage and disposal of excess material..	.893	.508	.359	.235	.166	.061	.030
Rock Excavation.....	4.650	3.675	2.865	2.370	1.740	1.125	1.025
Pipe Hauling.....	.713	.408	.305	.222	.165	.079	.045
Pipe Laying.....	1.510	1.194	.796	.588	.398	.239	.085
Caulking.....	.760	.600	.480	.435	.326	.131	.085
Temporary Paving.....	.246	.228	.193	.176	.140	.105	.105
Extra Work.....	3.191	2.257	1.224	.960	.596	.356	.119
Labor Driving Sheeting....	.863	.520	.469	.454	.418	.200	.101
Total Labor.....18.100	13.567	10.051	8.125	5.923	3.571	2.772	
Field Supervision 5%.....	.905	.678	.503	.406	.296	.179	.139
Maintenance of Tools 2%...	.362	.271	.201	.163	.118	.071	.055
	19.367	14.516	10.755	8.694	6.337	3.821	2.966

Consolidated Gas Company of New York

As of June 1st 1923

Manhattan-Mains

Material	48"	36"	30"	24"	20"	18"	16"	12"	10"	8"	6"	5"	4"	3"	2"	1¼"
Cast Iron Pipe....	22.875	12.075	9.791	7.116	5.304	4.597	3.881	2.545	1.929	1.451	1.074	.931	.706	.511	.393	.275
Cast Iron Spec....	4.425	2.569	1.924	1.209	.901	.781	.659	.432	.327	.246	.177	.161	.122	.086	.066	.046
C. I. Pipe Inspection at Fdy..	.092	.053	.039	.029	.021	.019	.016	.010	.008	.006	.004	.004	.003	.002	.001	.001
Lead Wool.....	.269	.179	.134	.116	.093	.079	.064	.041	.032	.027	.018	.014	.013	.011	.009	.007
Cast Lead.....	.818	.602	.526	.380	.204	.187	.175	.117	.099	.076	.053	.041	.035	.029	.023	.018
Yarn.....	.048	.042	.036	.033	.027	.024	.021	.018	.015	.012	.012	.009	.006	.005	.002	.002
Bed Blocks.....	.180	.074	.042	.032	.032	.028	.016	.016	.016	.016	.016	.016	.016	—	—	—
Wedges.....	.064	.028	.028	.028	.014	.014	.014	.014	.014	.014	.014	.014	.104	—	—	—
Lumber Used.....	1.110	.694	.640	.595	.547	.286	.281	.261	.134	.132	.123	.122	.121	.120	.110	.109
Lumber Left In.....	.578	.330	.165	.122	.116	.113	.111	.106	—	—	—	—	—	—	—	—
Total Material.....30.569		17.626	13.325	9.660	7.259	6.128	5.228	3.560	2.573	1.980	1.491	1.312	1.036	.764	.605	.458
Storeroom Charge 5%	1.528	.881	.666	.483	.363	.306	.262	.178	.129	.099	.075	.066	.052	.028	.030	.023
Grand Total.....32.097		18.507	13.991	10.143	7.622	6.434	5.500	3.738	2.702	2.079	1.566	1.378	1.088	.802	.635	.481

Consolidated Gas Company of New York

As Of June 1st 1923.

Bronx—Mains

Material	48"	36"	30"	24"	20"	12"	8"
Cast Iron Pipe.....	28.875	13.075	9.791	7.116	5.304	2.545	1.451
Cast Iron Specials.....	2.697	1.542	1.154	.725	.541	.259	.148
Cast Iron Pipe Inspection at Foundry.....	.089	.051	.038	.028	.021	.010	.006
Lead Wool.....	.269	.179	.134	.116	.093	.041	.027
Cast Lead.....	.818	.602	.526	.380	.204	.117	.076
Yarn.....	.048	.042	.036	.033	.027	.018	.012
Bed Blocks.....	.180	.054	.042	.032	.032	.016	.016
Wedges.....	.084	.028	.028	.028	.014	.014	.014
Sheeting Used.....	.791	.486	.448	.417	.383	.183	.092
Sheeting Left In.....	.404	.231	.116	.086	.081	.074	.—
Total Material.....	28.255	16.290	12.313	8.961	6.700	3.277	1.842
Storeroom Charge 5%.....	1.413	.815	.616	.448	.335	.164	.092
Grand Total.....	29.668	17.105	12.929	9.409	7.035	3.441	1.934

Services

Consolidated Gas Company of New York

As of June 1st 1923.

Labor

Size	8"	6"	5"	4"	3"	2½"	2"	1½"	1¼"	1"	¾"	½"
Excavation & Backfill...	27.360	27.360	22.237	22.237	22.237	22.237	22.237	22.237	22.237	22.237	22.237	22.237
Cutting Wall.....	1.950	1.950	1.950	1.950	1.950	1.950	1.950	1.950	1.950	1.950	1.950	1.950
Temporary Pavement.....	1.980	1.980	1.523	1.523	1.523	1.523	1.523	1.523	1.523	1.523	1.523	1.523
Inserting Tee.....	8.925	6.925	—	—	—	—	—	—	—	—	—	—
Cutting Hole in Main....	—	—	.650	.650	.650	.650	.650	.650	.650	.650	.650	.650
Installing Sectional Sleeve.....	—	—	2.320	2.320	2.320	2.320	2.320	—	—	—	—	—
Pipe Laying.....	4.628	3.732	2.948	2.127	1.493	1.157	.858	.522	.522	.373	.299	.187
Cutting & Threading Pipe.....	2.277	2.277	1.714	1.128	.759	.759	.759	.759	.759	.612	.612	.612
Total Labor.....	47.120	44.224	33.342	31.945	30.932	30.596	30.297	27.641	27.641	27.345	27.271	27.159
Field Supervision 5%...	2.356	2.211	1.667	1.597	1.547	1.530	1.515	1.382	1.382	1.367	1.364	1.358
Maintenance of Tools 2%	.942	.884	.667	.639	.619	.612	.606	.553	.553	.547	.545	.543
Total Labor.....	50.418	47.319	35.676	34.181	33.098	32.738	32.418	29.576	29.576	29.259	29.180	29.060
Cartage.....	.451	.451	.451	.451	.451	.451	.451	.451	.451	.451	.451	.451
Pavement Inspection & Permits.....	1.418	1.418	1.279	1.279	1.279	1.279	1.279	1.279	1.279	1.279	1.279	1.279

Services

Consolidated Gas Company of New York

As of June 1st 1923.

Material	8"	6"	5"	4"	3"	2½"	2"	1½"	1¼"	1"	¾"	½"
Pipe—30 ft.....	98.490	59.340	30.720	22.620	15.870	12.450	8.190	6.900	7.170	3.420	2.400	1.920
6" Nipples—2.....	—	—	2.892	1.416	1.004	.802	.448	.348	.288	.216	.156	.144
45° Ell—1.....	—	—	1.295	.926	.602	.395	.187	.138	.098	.052	.040	.041
Tee—2.....	4.420	3.039	4.708	3.218	1.926	1.258	.578	.242	.282	.174	.118	.112
Plug.....	—	—	.477	.227	.138	.097	.054	.038	.027	.022	.016	.011
Valve—80%.....	25.256	19.688	15.024	10.360	5.680	4.264	3.456	2.944	2.944	.668	.424	.367
Valve Box—80%.....	1.976	1.976	1.976	1.976	1.976	1.976	1.976	1.976	1.976	1.976	1.976	1.976
Plug—¾" R.H.....	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031
Badge.....	—	—	—	.210	.105	.087	.070	.052	.045	.036	.028	.019
Bushing.....	1.450	.659	.490	.264	.158	.111	.074	.047	.027	.032	—	—
Sidewalk Pavement.....	7.475	7.475	7.475	7.475	7.475	7.475	7.475	7.475	7.475	7.475	7.475	7.475
Plugs, Tee, Lead, Yarn.....	28.607	19.672	—	—	—	—	—	—	—	—	—	—
Sectional Sleeve.....	—	—	8.197	8.197	8.197	8.197	8.197	—	—	—	—	—
Total Material.....	167.715	111.880	73.285	57.020	43.159	37.137	30.736	20.287	20.373	14.102	12.674	12.096
Storeroom Charge 5%..	8.386	5.594	3.664	2.851	2.158	1.857	1.537	1.014	1.019	.705	.634	.605
Total Material.....	176.101	117.474	76.949	59.871	45.317	38.994	32.273	21.301	21.392	14.807	13.308	12.701

refuse there. In the Bronx the material would be dumped in vacant lots; about two mile long haul. This cartage is not done by motor trucks, but by horse-drawn vehicles—the cheaper method. The capacity of the vehicles are 2½ cubic yards, and six round trips a day, are made. .035 cubic yards per foot is the quantity displaced by the pipe as excess material disposed of in the laying of the 12-inch mains.

There are six schedules which purport to show the details going to make up the unit costs for the labor and material of laying all of the mains embraced and included on Pltff's Ex. No. 268, as follows:

(Here follow schedules, marked side folio pages 699, 700, 701, 702, 703, and 704.)

[fol. 705] By Mr. Donnelly:

The trenches for the 48-inch cast iron main would be three feet over the main, plus twice the thickness of the main, plus the inside diameter of the main. That is 3 feet plus 4 feet plus 2 inch-, which is 7 feet 2 inches. The figure of 7 feet 2 inches is correct for the averages 48-inch main and is as long as the 48-inch main, which is laid in lengths of 12 feet, which is the length of the trench, if they were laying them by individual lengths. When laying mains, we open as much trench for the reception of the main as the City will let us, depending on the territory. In Manhattan you are lucky to get away with a block; in the Bronx two or three blocks, if you are in good grace with the authorities;—that is a block at a time. We cannot go ahead and open up another trench in the next block where we are going to put our main until the laying of the main in the trench that had been dug is finished. This is so in an extreme case. In the Bronx we are usually allowed two or three blocks, of continuous opening; we back-fill on one end to complete it, and excavate on the other to open it, except on a main of the size of a 48-inch where we have to make test holes ahead and open the intersections way ahead of our work, because we may have to re-lay everything in that intersection, as we

usually do with a 48-inch main, and have to have that work done ahead of time so we can progress along with the proper speed. It is a continuous operation, no time elapses between the making of the trench and the time we are going ahead to the next block. We do not finish one block and [fol. 706] start afresh on another, for the idea is to keep the excavation gang working all the time, the pipe-laying gang behind them, and the shoring gang before and the caulkers after the pipe-laying gang, the back-filling after that, which all goes on simultaneously, but not at the same point. The trenches for the 12-inch mains would be about 4 feet 2 inches, in depth. All cast iron pipe, is made to lay twelve feet—that is the total length of the pipe is longer than twelve feet, but the depth of the bell is three or four inches.

12-inch mains are laid wherever room can be found, no specified distance is measured from the curb, for there may be sub-surface conditions, near the curb, making it necessary for us to go out further. The difference of the depth of a 12-inch main trench and an 8-inch main trench is 4 inches. The trench for the reception of the 8-inch main is about 4 inches shallower than that for the 12-inch. The difference of the 8-inch and the six inch is 2 inches, shallower, and between the 6-inch and the 4-inch, about the same. We endeavor in all cases to have three feet on top of the pipe, so you have three feet plus twice the thickness of the pipe, plus the diameter of the pipe, as the average bottom of the trench. This holds true to main laying, no matter of what diameter.

Referring to Plaintiff's Exhibit No. 268, the price as of June 1, 1923, for 6-inch cast iron pipe is $69.60 per ton, delivered in New York. The three inch pipe is $78.60 per ton, delivered in New York. The 4-inch is $71.60; 8-inch is $67.60, and the 12-inch is $67.60. These prices were ob- [fol. 707] tained from The United States, The Warren, and the Fox foundries; they represent in my judgment the market price of that class of pipe as of June 1, 1923. I made inquiries for prices, as of June 1, 1923, from those foundaries, in July of 1923, from whomever was in charge of their sales at the time. In the United States Foundry it was Mr. Stokes; as to the Warren foundry, I do not know the man's name; John Fox Company's salesman was Mr.

Nicholas Engle, and all these inquiries were made by telephone and were confirmed by letters. The whole subject matter of these inquiries covered a period of probably two or three weeks, for after getting the information had to check it up with other sources of information to obtain what in my judgment, represented the market price. I never gave any information on the subject of how much pipe we were inquiring about, never mentioned quantities at all, merely said that there was a considerable quantity required, and they quoted on car load lots. Neither did I tell any of them that it was for a prospective order of 5,219,487 feet—plus cast iron pipe for mains of various diameters, for if I had, we would have had a higher price. These prices I have given are the lowest received from any one of those companies. I do not think I can give you all of the prices I got from each of the foundries, the lowest of these, which were from the United States Cast Iron Pipe & Foundry Company, I have given you. Take the Warren Foundry, on four inch pipe I gave you $71.60 as the price used, and that is the price that the United States Cast Iron Pipe & Foundry Company quoted. The Warren Foundry quoted $72.60, [fol. 708] $1 per ton higher, and, of course, I do not use the higher price. Now, on five inch pipe, the Warren people have a separate quotation and we took five inch pipe at the same price as the six inch, because the United State*d* did not give that as a separate quotation. Of course, the five-inch pipe is a very special size and no foundry would make that except as a special order today, and we took it at the price of six-inch. Then, on the six inch, the prices for six inch to sixty inch were the same with that concern. I have not the price here from the John Fox Company, but my recollection is it was very near the Warren and higher than the United States. The five inch is a very special size and no foundry would make it except on special order, they will make it if asked to, but not at the price of the six inch pipe, for that size they are running through the mill all the time. The term "stock," means stuff that is very commonly used, I would say that everything except the 5 and the 1½ inch and 2 were ordinary stock size and the foundry would make them without question; but on the 5-inch they might request that you take 6. They would rather make that than 5. I do not know how long it is since 5-inch cast iron pipe has been

used for gas main, we do not lay the 3-inch size now and have not for some years; not since before my time.

The valve boxes are part of the material that I have included in my appraisal Exhibit 268, under the heading "Specials." This covers anything in the line of cast iron, wrought iron or steel material that is a physical part of the main system, except the straight pipe itself, and that may [fol. 709] be anything from a boiler plate special box built to go over a subway down to an ordinary valve. It may be a cross or a bend or a drip or a T, the fittings of the drip,—anything other than straight pipe in the line of material that goes into the permanent distribution system. The valve boxes used in making up Exhibit 268 are of cast iron, come ready made and in accordance with our design. The price of the valve boxes, as of June 1, 1923, are the same, practically, as the special fittings, which are about $125 a ton plus freight $2.60 a ton; these prices I got from the same foundries, made at the same time; part of the same inquiry; necessary specials.

Going back to that cast iron pipe of the diameters we were speaking of a moment ago, we purchased our pipe for 1923 in December, 1922, and the 6-inch was $56.10 per ton. The price of the 6-inch cast iron pipe on January 1, 1922 was $41.40. There have been changes in the prices of 6-inch cast iron pipes since June 1, 1923; it is not a fluctuation. The pipe ran along level until, as I recollect November, 1923; then dropped a little, and then went up again this year. Now it is $64.60. The price of pipe has varied, when it is lower, it is lower than when it was higher; and when it is higher, it is higher than when it was lower. This has occurred over the period of the history of the manufacture of cast iron pipe, for instance, the price may be blank dollars a ton *do*day, and a week from now it may be something else. That can not be governed by any set rule, it is entirely a proposition of supply and demand. There is no fixed period because the price may change in a year up or down a very small amount up or down one way or the other, [fol. 710] and it would remain, nevertheless, the same to us for that year for the reason that we have a contract. The price of six-inch cast iron pipe, on January 1, 1922 was $51.30. We bought pipe in November, 1921, at $48 per ton, and in February, 1922, at $41.40 per ton. The price I gave

you was the Iron Age average quotation for the month of January, 1922. The market price for six-inch cast iron pipe as of January 1, 1922, remained the same on February 1, 1922; in March 1922 it was $51.64; in April $52.80; in May $54.30; in June $54.80; in July $57.45; in August $57.90; in September $58.50; in October $58.50; in November $58.50; and in December $58.75, that December is of 1922. The prices are the Iron Age prices and are f. o. b. New York. Taking the Iron Age as an index, there was a variation during 1923: January, $59; February, $60; March, $61.50; April, $62.50; May, $62.50; June, $64.90; July, $67.30; August, $67.56; September, $68.60; October, $68.60; November, $68.10; December, $67.60; f. o. b. New York. The Iron Age is a trade publication and circulates among iron men generally, gas companies, and water department officials. It is one of the publications with which you keep in active touch. The other publications of a similar character are the gas publications and the engineering publications. I regard the Iron Age merely as giving the trend of market prices, but not a specific price at which a man could purchase at a specific time, that is to say, a man might be able to buy cast iron pipe for the laying of mains at lower than the prices quoted by the Iron Age, and he might have to pay more. We have had experience both ways. The Iron Age shows the general trend, but it will not pick up such peaks and valleys as may come into the purchasing experience of some one who is very active in buying the pipe. I do not know that any other publication give the information as to [fol. 711] the trend of market prices of cast iron pipe to the extent that the Iron Age does. The Engineering News Record gives the price monthly—what they claim to be the price, and the Gas Age record gives a little bit less detailed information, and you find spotty information in other trade journals.

The price paid by the Consolidated for 6-inch cast iron pipe in December, 1922 was $56.10, New York. They bought cast iron pipe during 1923, but for account of the affiliated companies. The Iron Age for April, 1923, gives a price of $62.50 and a purchase made for the account of the New Amsterdam Gas Company on April 13, 1923, was at the rate of $67.40. That purchase for the affiliated gas companies was pipe that had to be bought and used at that time.

It was pipe in excess of what we had ordered on the regular contract. At that time there were only 6-inch sizes purchased; approximately a thousand lengths; 12,000 feet, for the New Amsterdam, affiliated gas company. Another price in that year as a check, at which an affiliated company purchased was, in August of 1923, the Iron Age index indicates for 6-inch pipe $67.56, f. o. b. New York actual purchase was made for the Bronx Gas and Electric Company at $69.50. The quantity that was purchased for the Bronx was 10,000 feet, and the actual purchase price of $69.50 per ton represents the price, not delivered to their yard, but to the Van Nest station of the railroad.

The price on the special fittings, I gave include valve boxes. And on that the price as of June 1, 1923, was ascertained from the same source as that from which I derived [fol. 712] my information regarding the prices of cast iron pipe. I am not in a position to give the price of the fittings as of January 1st, 1923, because the Iron Age index merely quotes 6-inch pipe, which is an index of the trend of fittings. Fittings follow the pipe very closely, and we purchased none as of January 1, 1923. The nearest date was during the year 1923 when we received fittings which were purchased, and I believe this purchase was made in December, 1922, for 1923, at the following prices: 4-inch, 6 cents a pound; 6 to 24-inch, 5½ cents a pound; 30 to 48-inch, 6½ cents a pound. Fittings were quoted to us during the year 1922—the exact period is not specified—at .0498 cents per pound; by the United States Cast Iron Pipe & Foundry Company, f. o. b. Burlington. Those special fittings are not always bought from the United States Cast Iron Company, only when we buy our pipe, but we frequently buy special fittings from John Fox or from local foundries—foundries that do not make pipe, but just make specials. By "local foundries" is meant such as the Isbel-Porter Company, of Newark, New Jersey, and other such foundries in Jersey; Bartlett-Hayward Company have a foundry; people who can make fittings but have not the facilities for turning out pipe in quantities. As of March 1st, 1924, the price on 6 to 24 is 6¼ cents a pound, and on 30 to 48, 7¼ cents a pound. These prices are on certain standard fittings which the foundry specifies, and they will in many cases add for one extra bell, or something like that, an additional quarter of a cent a pound to the price.

The valve boxes are fittings, and a small part of the [fol. 713] situation. There are not many valves. Over each valve there is a box. Probably a thousand of them in the whole thing. There are also variations in the prices of these special fittings. They will vary in price in accordance with the supply and the demand and the cost of iron and various other things—labor. The price will usually follow the price of pipe, because it takes iron and labor to make them and it takes the same to make pipe. As a general proposition the variations in the prices of these special fittings are of the same character and they happen about the same time as the variations in the prices of the cast iron pipe itself. Among the details given in amplification of my unit per foot for the labor cost of laying the mains was extra work. The item of extra work covers the cost of changing the location of sub-surface structures, repairing damages to same incident to the work, making provision for temporary gutters, pumping water from the trench and repaving cuts damaged by summer storms, and also delays to labor on account of the same; repairing sidewalks, coal chutes and vaults, etc., damaged as an incident to the work; repairing damages caused by blasting, by flying chips from asphalt cutting, from pipe cutting, etc.; handling material into buildings where our work blocks the access to same; moving the sheeting to allow for laying of pipe; handling tidewater in the cuts; testing the pipe, purging the pipe, filling up depressions in the street due to the settlement after the main has been back-filled, and the replacement of cracked and defective pipes and specials. Those are the most common elements entering into the [fol. 714] item of extra work. The replacement of cracked and defective pipes and specials is not frequent, but happens once in a while and it is annoying and expensive. It may be that in the last tap of caulking your joint you may split the hub during the progress of the work of laying. This does not mean that the pipe arrived cracked. The pipe is sounded in a sling before it is lowered into the trench.

The unit of $.509 for that extra work is based upon my experience over a number of years in the laying of mains of that size, the amount of extra work that enters into laying a foot of that size main in Manhattan. On the 12-inch

that is an average figure for Manhattan. I would not have the same amount of extra work on mains of a less diameter than 12-inch; as the diameter becomes smaller the average amount of extra work is less, and as the diameter becomes larger the extra work increases, but not arithmetically but geometrically. That is, the ratio becomes very much greater as you get into the larger sizes. There would be extra work involved in all of the mains, no matter of what diameter they are; including the mains of the 48-inch size. That is to say, the encountering of sub-surface structures would obtain in the case of the 48-inch main, for you would have to reconstruct every street intersection, to get it in at all. The extra work in laying the 12-inch mains would not be as great in the Bronx as it would be in Manhattan. I made an allowance for that.

The cement in doing the extra work would be used: coming through an intersection you find a 4 or 12 bank duct line right in your way, a tile duct laid up with cement. [fol. 715] You have to change the location of that duct line either above or below the proposed line of your main, break that out, lay the new ducts in a new location, pull your new cables or else stretch your cables up and put split ducts around them, and then you have to fill that up with concrete made of sand, cement and broken stone. I do not assume that cement would be used in the jointing work, nor is it used by the Consolidated in main-laying.

Lead wool was one of the materials that I included in my appraisal. We have used two kinds of lead wool in Manhattan and in the Bronx. There is the New York lead wool and the lead wool known as Ulco lead wool, but I have taken the material as of one character, as the New York lead wool is no longer manufactured. I assumed there would be used ordinary pig lead; that is known as cast lead, purchased by the ton. The price of the lead as of June 1, 1923 is $.0730 per pound. It is bought by the ton, but is put in the joints by the pound and I have to figure it by the pound. The ton is 2,000 pounds. That is the price we are currently purchasing lead for and also the price which compares with the trend of lead prices in the various metal trade publications that carry that price. They are the Iron Age and the Metal Trades Journal, as I believe it is called, and also

the gas publications. There are a dozen concerns that can supply you with lead, but we usually purchased from the United Lead Company, who have an office in New York. We buy our lead in the form of lead wool, at the pig lead price plus the cost of manufacturing the lead wool, that is shipped from New Jersey. Lead wool is finely divided lead. Lead finely divides into long strings about half the [fol. 716] thickness of pencil lead in diameter, twisted into a hank and caulked into the joint cold. In Manhattan and in the Bronx we have both types of joints, lead and lead wool. The price of lead is not the same as of lead wool. Lead wool on June 1, 1923 was $.0895, that price was received from the United Lead Company, from whom we purchase. As I have stated the lead is purchased as lead wool. It is not necessary for us to purchase cast lead, for the reason that we have a certain amount of excess wool that cannot be used because it has become dirty or wet, and that is melted up to make cast lead where we need cast lead. We use very little of it nowadays, we make practically all our joints lead wool joints, which has been used since about 1908 or 1909. These make the mains tight, water tight, exposure tight, but then any lead joint would make it so, that is its purpose. Since about 1909 we started the use of lead wool, and the new mains laid after that time were laid with lead wool. All repair work, where a joint is involved, since 1909, in varying degrees up to a total at the present moment, has been made with lead wool—has been done with lead wool, and all mains laid. Lead wool costs more per pound, but you use somewhat less per joint, the labor cost of making that joint is somewhat greater than a cast lead joint. The lead wool and yarn joint is a better and more efficient joint than the cast lead and yarn joint. I base that upon my experience, in the use of both types or character of material.

Within the past two or three years we bought our lead wool from the United Lead Company. There is another concern in New Jersey that can make the old type New York [fol. 717] lead wool, but they are absolutely unreliable as to delivery, and you just can not get it from them; you can not buy it from them. Lead wool is bought on the basis of the price of pig lead as of that date, plus the cost of manufacture of pig lead into wool, that is to say, the price of the

lead wool is determined by the price of lead. In other words, the difference between the two prices represents what it costs to manufacture the thing which is known as lead into lead wool. I cannot recall at this moment, whether we bought any lead and lead wool at or about January 1, 1922, for we are continuously buying that material. The prices as of March 1, 1924 are: lead wool $.1109 per pound; cast lead $.09 per pound.

The price of yellow pine used for sheathing, in my appraisal, Plaintiff's Ex. No. 268, as of June 1, 1923 is, in the sizes here used $55, but we are using it twice, and that makes the price $27.50, per thousand feet board measure. I have no record here of buying any yellow pine for that purpose in or about June, 1923, but we are buying it continually for our work. I believe there has been no change in the price of yellow pine since June 1, 1923. It may have been raised a small amount or gone up a small amount. We have bought none since June 1, 1923, but my recollection is from looking at prices in the trade publications that it has gone up somewhat. The price that I have given as of June 1, 1923, was not at which the Consolidated Gas Company purchased it, but at which the Consolidated Gas Company could have purchased, from any large lumber company in the city. We buy it from anyone of half a dozen people around the city. The inquiry was made by me [fol. 718] through Mr. Knowles, of the purchasing department, and the figures brought to me. I ascertained that price from lumber concerns as to what it could be bought for and from trade publications what they are carrying that type of lumber at. I do not recollect at the moment from whom I inquired. The price of the second hand spruce that I assumed would be used for operations other than sheathing was $39.50 a thousand. I have no indication of any change in the price of that kind of lumber since June 1, 1923. I believe that price was obtained from the Donner Lumber Company, who handle that kind of second hand material. They are located near the Queensborough Bridge, in Long Island City. That price was obtained by Mr. Knowles, I believe, but that material we are purchasing frequently, and I had a line on that price. Of course, you cannot check that second hand price with trade publications. Second hand material is lumber that is spread

around, is sold as it is, and if it is what we want, we buy it. It is sold to us as it lays on the ground. The Donner Lumber Company is not the only concern in or about the City of New York that deals in that kind of lumber. There are dozens of people you can buy from. I merely recollect this concern, as the one from whom we have purchased. I think at times we also bought from Volk.

The yarn used in the joints is bought from various companies, there are probably a dozen machinery supply houses in this town that can furnish the yarn—the Strong Machinery & Supply Company, E. A. Barringer and several other firms of that character—the Connell Iron Sponge and Governor Company. I cannot recollect at the moment whether we bought any yarn in or about June 1923, for we are continually buying and receiving it. The price for the yarn [fol. 719] that is embraced in Exhibit No. 268 is 6 cents a pound; it is bought by the pound. Yarn has gone up since June 1, 1923, it was up in February and still is 7 cents a pound; that is a cent increase. I do not know where it is manufactured—it is sold here in New York and we buy it in New York, and is then delivered to our storage yards.

Sometimes there is, and sometimes there is not, a difference in the price of cast iron pipe of 6-inch diameter and cast iron pipe of larger diameters, depending on how the foundry is able to take orders and how the pits are filled up. The price per ton of cast iron pipe 8″ diameter is lower than 6″; the relative price of 6-inch and 10-inch would be the same as I have said with reference to 6-inch and 8-inch; 8 inch and 10-inch would sometimes be at the same price and sometimes less than 6-inch, never higher; the price of the 6-inch and the 12-inch is that the 12-inch would often be less than 6-inch, and frequently the same, rarely higher per ton than 6-inch. That stands true as you go on up to 20 inches. When you get beyond 24 inches you are getting into large sizes which may cost more per ton than 6-inches. The 24-inch often takes a higher price.

If you leave out the decimal figures, there are approximately 180,000 tons in my 5,219,487.81 feet of cast iron pipe included and embraced in Pltf's. Ex. No. 268. This includes the weight of the specials. As a rough figure, the weight of the pipe and specials in the ground would be approximately 180,000 tons. If that figure is used for making a

calculation, it would be much better to multiply out the weight per foot by the length of each size. As an approxi-
[fol. 720] mation of the total quantity of pipe, 180,000 is pretty close. I figured out approximately 180,000 tons myself.

Since I have had charge of the Consolidated Gas Company's Mains and Services Department, I believe we bought as much as 11,000, 12,000 or 13,000 tons of various sizes in one year. That was approximately in 1914 or 1915, from the United States Cast Iron Pipe & Foundry Company. The total delivery was, probably, made within a period of a year—that is the bulk of the total delivery. There may have been some disputes as to mains required and changes in size that held up delivery of some of the sizes. The shipments come in carloads. A car is the unit. A carload is of varying amount, depending on the diameter of the pipe and as to how you can load it in the car. For instance, you can only get about two or three 20-inch pipes across a car, while smaller sizes you can pack in much closer and get a greater tonnage. Not only one carload is sent along at a time; the foundry may supply to the railroad about twenty carloads consigned to us, and they may throw them off on sidings and at different places, and we may get one day a car and five days later five more cars, and may get three or four in one day. It is nothing that we can control. Anywhere from four days to four weeks elapses between the time the pipe leaves the foundry and the time we get it. Freight cars will be sidetracked, and so on. When the pipe is shipped from the United States Cast Iron Pipe & Foundry Company, it is sent to whatever yard we intend to take it in at. Usually the nearest rail-
[fol. 721] road yard or railroad pier to our storage yard, if we are going to stock the pipe. Otherwise, if it is pipe in bulk to be laid on a job, it is sent to the nearest railroad terminal from which we can truck it to the job. The pipe is never delivered to the job itself by the Foundry company, but is sent from the railroad yard to the point where the pipe is going to be laid. The shipper will deliver to the nearest yard he can, to get it to our point of destination. We will specify where we want the pipe delivered. The nearest railroad yard to any of our storeyards is our 66th Street storage yard overlooking a railroad yard. Un-

fortunately we have not an elevator, so we have to go several blocks around to get to the cars. We take the pipe from the railroad yard to our storage yard, by motor truck or horse-drawn vehicle. There are railroad yards all over Manhattan and the Bronx. There are terminals at Greenville, New Jersey and other points from which we may have our railroad cars delivered alongside the docks at different points. On the New York Central there are freight sidings all the way up through the Bronx which we have used; there are railroad terminal docks all around the water front; there are other piers from which cars may be handled from barges or railroad floats.

When laying mains in Manhattan, we do not have the pipe delivered to the railroad yards up in the Bronx, though in some cases it might be worth while to, if we were laying in upper Manhattan, to make use of that siding up at Marble Hill—that would be the nearest point for us in the Bronx. The nearest railroad yard in the Bronx, when laying gas mains in the upper part of Manhattan Island, would be the New York Central yard just south of 230th [fol. 722] Street, from which the automobile shipments are handled—there is a big yard there. There are railroad yards in Manhattan, but the usual deliveries for our use is the storage yards at 17th Street and 111th Street, both on the east side of Manhattan, or by means of barges to the nearest pier. There is a pier on the east end of 110th Street—there is a bulkhead there that is our own property; and we have a dock on the east end at 21st Street; there is also a dock at east 17th Street, and those are used for one of the others. We can also get pipe into a dock not necessarily our own. We can take it in at any public city pier.

We have a five-ton truck for the purpose of transporting, from the railroad yard to our storage yard, and if it is available we use it. If that is being used for something else, we may use horses. There is very little difference between the cost of the two, taking the practical conditions that we have to meet, where the haul is short. The horse-drawn vehicles can take two, two and a half or three tons, and the motor truck five. We only have one five ton Mack truck in our department, for pipe hauling. Our other

motor trucks do no hauling in bulk, they merely take a length or two out to a job.

The labor cost of laying mains have the same rate of pay, in so far as the mains of the various diameters are concerned, for the caulkers. In other words, no matter what the size of the diameter of a main was the labor cost for the caulkers is the same. He gets the same per diem whether he is caulking an inch-and-a-half or a 48. Referring to Plaintiff's Exhibit 268, the wages that were paid to the caulkers was $8.00 for an eight-hour day; $1.00 an hour. [fol. 723] There has been a change in the rate of wages paid to caulkers since June 1, 1923, they are now getting $9.00 per eight-hour day; have been getting $9.00 for three or four months, I am not sure of the exact time that the change went into effect.

The Consolidated Gas Company has no such men as caulkers; we have men who are classed as skilled workmen, who do caulking, among other things, but not only caulking. They are engaged in a great many other occupations besides caulking, in other words, we do not pay them as caulkers. When they perform labor which involves operations other than caulking, they perform skilled labor, also manual labor. We pay them anything up to and including $5.60 per day. The $8.00 per day at the rate of wages paid to caulkers as of June 1, 1923 was the union rate for caulkers in the vicinity; our men who do caulking are not unionized. I made my inquiry in the preparation of Pltff's. Ex. 268 as to the rate of wages paid to caulkers on June 1, 1923, sometime after June; between June and September of that year; from a delegate, whose name I do not know at the moment, of the Caulkers' Union. Their attorney is a man named Byrne, with whom I was talking several days ago on that same question. The inquiry was made before the $9.00 wage scale went into effect. This was made verbally. The delegate comes in to see us every once in a while.

By the Master:

The amounts allocated on the different sizes for caulkers in Manhattan are: for a 48, $.76 per foot; 36, $.60 per foot; 30, $.48 per foot; 24, $.435 per foot; 20, $.326 per foot; 18, $.261 per foot; 16, $.219; 12, $.131; for a 10-inch, $.107;

[fol. 724] eight-inch $.085; six-inch, $.059; five, $053; four, $.046; three, $043; two, $040; inch-and-a-half, $.037.

By Mr. Donnelly:

The appraisal which I made of the main system of the Consolidated Gas Company in the affidavit that was used by the plaintiff on its motion for the temporary injunction in this case was as of May 1, 1923, and at that time I did have information as to the rate of wages paid to caulkers. The rate of wages paid on January 1, 1923 was $8.00, and on January 1, 1922 as far as I can recollect it was $8.00, too. I have a note here to the effect that on October 1, 1919 the rate was 62½ cents an hour. That was, I believe, $5.00 a day. How long it remained at that figure I cannot say, but believe that they got their $8.00 a day when the building trades were all raised a dollar a day by some proclamation of the Mayor—action of the Mayor. I do not remember that exact date, but it was after October 1, 1919.

There are foremen included in the labor embraced in my appraisal, Pltff's Ex. 268. I did not assume any number of foremen; any number of any kind of men; nor any number of gangs over each one of which there would be a foreman. I assumed no rate of wages paid to the foremen, except a rate comparable with the 60 cents per hour. If the labor rate goes up, the foremen are raised with them; if the labor rate goes down the foremen's rate goes down. It follows the line of the general labor rate. The cost of the foremen is included as a great many other items are, in the cost per cubic yard of excavation, the cost per foot of laying pipe, the cost per cubic yard of rock excavation, and the cost per unit of all the labor items. I came to the 60 cents per hour [fol. 725] as the rate of wages paid to labor by using my judgment, and checking up with other contractors to see what they were paying their men. Those contractors were: Thomas Cummings Contracting Company; Gantz & Reynolds; Paladino Contracting Company; McGovern, subway contractor; The Beaver Engineering & Contracting Company; and a great many other contractors that I meet in the course of the day's business.

The Consolidated was paying its laborers as of June 1, 1923 50 to 55 cents an hour; some a little higher than that; about 60 cents an hour. Ordinary laborers were getting as

much as from 50 to 55 cents an hour, even the rate of 60 cents was paid to ordinary laborers, it depended upon the period they were hired. The 60-cent-an-hour men were not doing caulking work. Some of the men employed by the Consolidated at 60 cents an hour could have been doing caulking work. I did not know that immediately prior to June 1, 1923 Duncan & Company, who do work for the Kings County Lighting Company, were paying the laborers at the rate of 50 cents an hour. The rate of wages paid to laborers as of June 1, 1923, 60 cents per hour, would be the same rate of wages paid to laborers on January 1, 1923. On January 1, 1922, I believed it would be somewhat higher, I think it was as high as 75 cents an hour then for general labor. We were not paying all laborers as high as 75 cents an hour on January 1, 1922, but 50 to 55 cents.

By the Master:

I do not know what the city rate was on the 1st of June 1923; that is a different proposition entirely than the kind of labor that you would have to have for work of this sort.

[fol. 726] By Mr. Donnelly:

On June 1, 1923, the Bronx Gas and Electric Company was paying about 10 per cent. higher, I believe, than the Consolidated Company; Central and Northern Union from 5 to 10 per cent. higher; Westchester Lighting Company about 5 per cent. higher. On January 1, 1922, I believe there was no change, but in April 1922, there was a period when the mills in New England shut down for a time and a lot of cheap but inefficient common labor was available at 40 cents an hour. I picked up a lot of it on that 20-inch main that we laid. We had a turn-over of about 100 per cent. in a week. They were of no value at all. That was a rather unusual experience with me, but other labor was very scarce. We tried these people out and they were no good. I do not know what the Brooklyn Union was paying its laborers on June 1, 1923; January 1, 1923; January 1, 1922, nor what they pay them now. They are not details with which I keep myself familiar with.

The caulkers do the yarning, and are paid the same rate; I assumed as of June 1, 1923, a rate of $8 per day.

Our skilled workmen do yarning and caulking, which is work done by caulkers, there is no special trade of yarner. The work done by a yarner known as caulking is done by skilled labor.

The price assumed for excavating and back-fill for 6-inch cast iron pipe on June 1st, 1923, is $3.60 per cubic yard. I got that price from my experience in laying mains. I did lay mains about June 1st, 1923. The Consolidated did not pay for excavating and backfill. It paid the men that did the work. It cost a great deal more than that on Manhattan Island. They differentiate from the assumptions that I made as to the conditions which would be encountered in laying the 6-inch mains referred to on Pltff's Ex. 268, by being a part of the experience which makes up the average [fol. 727] —the high and the low; my figure is $3.60. About two-thirds is for the excavation and one-third for back-fill. The units for excavating and back-fill for mains of larger diameter than 6-inch is exactly the same unit, $3.60 per cubic yard. No matter what the diameter of the main may have been.

I know John T. White, the engineer of distribution of the Brooklyn Union Gas Company. I think he left the Consolidated Gas Company just about the time I came back in 1910. Have read over some of his testimony that was given before the special master who is now trying the case brought by the Brooklyn Union Gas Company to set aside the dollar gas law. Before making up my appraisal I did not confer with Mr. White about the prices that I incorporated on the appraisal, but one of my assistants, Mr. Travis, conferred with Mr. White as to the pipe prices they had been able to obtain. That was done at my direction, but it was only with reference to the price of the pipe that I asked him to confer with Mr. White. What other conversation he may have had with him I do not know. The figures contained in my appraisal Pltff's Ex. No. 268 and in the appraisal Pltff's Ex. No. 270, in this case, I did not show to Mr. White. I saw Mr. White before our appraisal was handed to the other side, but our appraisal was complete at that time. I cannot place the exact date, but it was approximately a month ago. It was in Brooklyn, during the time he was testifying. None of the prices that are contained either in Pltff's Ex. No. 268 or Pltff's Ex. No. 270,

were obtained as the result of any talks or conferences that I had with Mr. White.

The materials which enter into the installation of serv- [fol. 728] ices are wrought iron pipes. It is all wrought iron that I have assumed in Plaintiff's Ex. No. 270. Nipples, L's, T's, plugs, valves, valve box, round-head plugs, badge, bushing—the fitting that reduces the size. Sidewalk pavement, sectional sleeves, plugs, T's, lead and yarn. Yarn is one of the materials that is used in installing services; when you have to place a sectional sleeve on a main you have to use yarn in making up the end joints where the sleeve goes on the main.

We took slightly less than cost of cartage as incurred by the Consolidated Gas Company on June 1, 1923, and used that as the figure that I have given for the cost of cartage in the labor of laying six-inch mains. When making up the figure I have given on Pl'tff's Ex. No. 268, I had in mind the taking away of excess material from the trench and having to bring the pipe from the nearest railroad yard or dock, to the trench. The price for cartage relates, as far as this six-inch main is concerned, to Manhattan. That price for cartage on the Manhattan sheet relates to Manhattan only. The six inch mains on Manhattan Island are generally throughout the entire Island, they are not confined to any particular section. A proportionate number, compared to the street mileage are below 14th Street. There is no particular section of Manhattan Island where the six-inch mains are greatest in number. In making up my figure for cartage in the laying of six-inch mains, I assumed that the pipe would be carted, from none of the three store yards, but would be taken directly from the railroad yard and delivered on the job, and not to our store yard. To do that it would not be necessary to have the trenches ready [fol. 729] for the pipe, we could put them on the street, depending the street and the size of the pipe. I did not assume that all of the mains embraced on Pl't'ff's Ex. No. 268 was to be laid at the same time, and no time was figured for laying them. I assumed the cost of laying them as of June 1, 1923. A part of this cartage was likewise for the disposal of excess material.

When the mains are laid by the Consolidated Gas Company, the foreman in charge of the gang doing the work

turns in two forms, a labor and material ticket and the district draftsman turn- in a sketch. The work ticket gives the cartage, depending on how the cartage is incurred; it may be hired cartage, which we have at times, and come in on a bill to the company. Where the cartage has been by the Consolidated Company the procedure whereby the accounting department gets the information is: the number of hours of the particular type of ticket used is set up on the labor ticket; that is, the number of hours, as to the hours used by the horse and cart, or the truck No. 247, whatever it happened to be. The cost of carting from the railroad yard to the storeyards is given to the accounting department by a report from the district superintendent as to the amount of cartage he has used on various items, such as carting pipe from the dock to the storeyard. Where pipe is carted from the storeyard to the job, that is the only item of cartage that would appear on the job ticket, because that is the only thing it covers. The other is putting the pipe into storage, and that is a pipe and special charge. The cartage from the storeyard to the job may sometimes be let out, also the cartage from the railroad yard to the storeyard. [fol. 730] I keep records of the cost of particular jobs of laying mains separately. In a record of that kind I do not include anything for the cost of certain pipe that may have been carted from the yard. That charge is a charge to the storage of the pipe, the pipe goes into stock with that charge against it. There is no allocation in our practice to a job of such expense as may be incurred, other than the charge to pipe and specials of the charges incurred in the yard. That is an accounting matter with which I am not thoroughly familiar.

A man can yarn and caulk a cast lead joint on a 6-inch main in half an hour; 8-inch, two thirds of an hour; 4-inch, a third of an hour; 12-inch, one hour; and 30-inch, three hours. I assumed the joints on the sizes 12-inch and larger, would be done by Pneumatic tools, but you could not do it properly on anything smaller than 12-inch. I know it would not be practicable, for I have tried it with pneumatic hammers down to 6-inch sizes. There is no difference in the time, when using the pneumatic hammer, but there is a considerable difference in the efficiency of the joints. Pneumatic hammers are faster in work, but there is a certain

amount of equipment and a certain amount of difficulties you have with the tools, and the actual experience has demonstrated it is substantially the same. We have had men alongside of each other with hand and pneumatic equipment. It does not become more expense, in using the pneumatic hammers, it is exactly the same.

The material unit cost per foot covered by the timber in the blocks of the 6-inch mains listed in Pltf.'s Ex. No. 268 are the bed blocks, the fourth item from the bottom, [fol. 731] above the subtotal, and the two last items are the lumber used and the lumber left in. I have given for the 6-inch a unit of .016. The bed blocks that are used do not depend upon any particular condition under which they are used. The purpose of the bed block is to provide a level surface on which to rest the main and on which to wedge the main in place. The trench is more or less uneven when it is dug and you have to dig out for your bell, the bed block goes back of the bell and back of the spigot and the pipe has to be very carefully graded so it will drain. The use of the bed block is in no way dependent upon the conditions of the soil in which the main itself rests, except that you might have, in some very soft soil, to put in three or four bed blocks, and those bed blocks are left in. The main, if it is properly back-filled, after it has been laid, is rigid enough to hold in place, notwithstanding the possible deterioration of the bed block underneath. That is tamped in the earth around and is packed around the main, to make a solid surface around it. I most certainly would say that my unit of .016 for bed blocks given in connection with 6-inch mains in my mains appraisal was a fair and reasonable price, for it could not have been properly done, in Manhattan or the Bronx, at a unit of .0058 per foot. I do not know the character of lumber used by the Brooklyn Union for the bed blocks.

Speaking of the excavation and back-fill for all of the mains included in Pltff.'s Ex. No. 268, I assumed that it would all be done by hand labor, except the rock excavation, which would be accomplished, where possible, by pneumatic tools; the excavation of the pavement would be ac- [fol. 732] complished by pneumatic tools; and that I have figured on. But the earth excavation would be made by

hand methods, throughout the entire Island of Manhattan, because no other method could be used, on account of the sub-surface structures and other things in the way. It would be a great deal more expensive even if you were permitted to use excavating machines.

The main system to which I have referred on Pltff.'s Ex. No. 268, was intended to be a reproduction in its entirety of exactly the same kind of mains as are now on the ground. I am familiar with the maps which the company keeps showing its system of mains in the streets. It is a fact that on Map 160, on First Street from the Bowery to Second Avenue, a distance of approximately 370 feet, the map shows that we have one 6-inch Consolidated Gas main, one 4-inch Mutual main, on the north side of the street; and one 6-inch Consolidated Gas Company and one 4-inch New Amsterdam main on the south side of the street.

On Map 162 is shown on Third Street between Sixth Avenue and Macdougal Street, for the entire length of the block, one six-inch Consolidated main and one six-inch Mutual main on the north side of the street; and on the south side of the street one sixteen-inch New Amsterdam main, one six-inch Consolidated main, and one four-inch Mutual main. Mutual is Consolidated; it has been so since the latter part of 1922, but the map still reads "Mutual." This same map shows the block from Macdougal to Sullivan Street, a distance of approximately 200 feet. We have one six-inch Mutual main, one six-inch Consolidated main; and, on the south side of the street, one 16-inch New Amsterdam, one six-inch Consolidated, and one four-inch [fol. 733] Mutual main. On Third Street from Sullivan to Thompson Street, the map similarly shows five mains, a length of approximately 200 feet. This is also true as to Third Street between Thompson Street and West Broadway. On Third Street, from West Broadway to Worcester Street, this same map shows a six-inch Consolidated main, and a six-inch Mutual main, on the north side, and a 16-inch New Amsterdam main and a six-inch Consolidated main on the south side of the street; approximately 200 feet in length. The same conditions prevail on Third Street between Worcester and Greene Streets. On Third Street, from Greene Street to Mercer Street, a distance of ap-

proximately 200 feet, this map shows one six-inch Consolidated, one six-inch Mutual and one thirty-inch Mutual on the north side of the street, one 16 inch New Amsterdam and one six inch Consolidated on the south side of the street. The conditions are as stated.

In respect to the Third Street section between Greene Street and Mercer, I do not know who originally owned the 6 inch main of the Consolidated Gas Company on the north side, nor who originally owned the 6 inch main on the south side. As to the 6-inch and 30-inch Mutual main; the Mutual originally owned the Mutual. I do not know whether those were originally put in by the Mutual Company; nor can I say who originally installed the 16-inch main of the New Amsterdam Company on Third Street, Map 162, between Mercer Street and Broadway. There are five distinct mains running the full length of the block, between Mercer Street and Broadway, about 200 feet. On the north side is a 6-inch main of the Consolidated Company and a 30-[fol. 734] inch mian of the Mutual Company, while on the south side of the street there is a 16-inch New Amsterdam main, one 8-inch of the Mutual Company and one 6-inch of the Consolidated. If I were asked to reproduce, the mains of the Consolidated Company within those limits, I would put in exactly what is there now.

[fol. 735] New York, March 21, 1924.

Met pursuant to adjournment.

COLIN C. SIMPSON, JR., a witness in behalf of the plaintiff, resumed the stand.

Cross-examination continued by Mr. Donnelly.:

In regard to the distance from the curb to the center of each main, on the block between Mercer Street and Broadway, shown on Map 162, the block is approximately 200 feet long. That is not an unusual situation there with reference to the contour of the street, but you want the curb distance and it may be different at any one point that I take. The street may run along in a straight line on that block, but the main does not, so that if I give you the dis-

tance at any particular point it would not be the same distance at any particular point farther along in that block. You see right there, that 6-inch is three or four feet farther south at that point than it is at this point. I will give you [fol. 736] the distance at the west house line of Broadway from the curb to the center of the main. On the north side of the street the 30-inch main is four feet south of the north curb or the center of the 30-inch main; the 6-inch main is 5 feet 8 inches approximately south of the curb at that point; on the south side of the street the 6-inch Consolidated main is four feet north of the south curb; and the 8-inch main is five feet eight inches north of the south curb. There are four Consolidated mains in that block. I scaled this map with an accurate decimal scale of one-inch to fifteen feet, made up specially for maps and similar in form to the engineer's scale. At the middle of the block on the north side of the street, six-inch Consolidated, 4 feet 8 south of the north curb, 30-inch main, six feet south; on the south side of the street 6-inch main 3 feet 6 inches [fol. 737] north, 8-inch main, 5 feet 8 inches north. At the east building line on the north side of Mercer Street; 6-inch Consolidated, 6 feet; 30-inch main, 6 feet also. On the south side of the street; 6-inch Consolidated, 4 feet 6 inches; 8-inch, 6 feet. There are mains on both the east and the west sides of the block and I have given you both sides of the block, the north and south. Four of the five mains in that block are Consolidated. The 16-inch New Amsterdam on the south side of the street is not Consolidated. At a point west of the house line on Broadway, the centre Consolidated mains are 16 feet 6 inches apart on the center lines. At a point at the center of the block, the two nearest Consolidated mains are 16 feet 6 inches apart on the center lines. At a point to the east of the house line on Mercer Street, the two Consolidated gas mains are 16 feet 3 inches apart on the center line.

On the south side, right side, of the street the two Consolidated Gas Company mains are situated nearer to the curb than the New Amsterdam mains. In my cost to reproduce this property on this block, I did not figure that I would dig a trench for the 6-inch main, lay the main and backfill the trench, and then dig a trench alongside the 8-inch main lay the 8-inch main and again back-fill the trench. I assumed as many trenches as were necessary to contain

the mains would be dug to reproduce those mains on that block, the number depending on the distance between the mains,—it may be one on each side at some point or it may [fol. 738] be two on each side. With reference to the mains on the north side, the 30-inch main and the 6-inch main were assumed to be contained in one trench, the width of which is 5 feet 6 inches, wide enough to hold the two mains, one of which is on top of the other.

At the west house line of Broadway there are two trenches; that is, the mains are of sufficient width across there that the trenches do not overlap. At the east house line of Mercer Street the mains are contained in one trench as they are close enough together so that the inside line of the two trenches would overlap. With regard to the trenches for the 8-inch main and the 6-inch main at the west house line of Broadway, the 6-inch main would be a three foot wide trench and the 6-inch main two feet six inches. I made no assumption that they would be dug simultaneously, as it was not necessary for the purpose of the appraisal. The City has frequently granted permits for the laying of mains on both sides of downtown streets at that location. The City permits you to keep open trenches simultaneously dug on both sides of the street in special cases but those cases would be covered by the special conditions and unless there is a very good reason for blocking traffic in a block, we would not attempt it. The Department of Highways grants the permit but has little to say about the closing of a street for traffic purposes; [fol. 739] that would be up to the Police and Fire Departments. We have received permits from the Highway Department to open two trenches simultaneously, frequently in laying the large mains to alter and relay a whole block with a smaller main and have had two trenches opened. I recall sometime in the past ten years we did that on First Avenue all the way up from 63rd Street. First Avenue is a 100-foot street from building line to building line and about 60 from curb to curb. Third Street, from Mercer to Broadway is 51½ feet from building line to building line, and 28 feet from curb to curb. On the north side of the street, or at a point at the west house line, of Broadway—there would be two trenches until you reach such a point running west that the trenches would coincide—would be made one trench.

By Mr. Ransom:

On the south side from approximately the centre of the [fol. 740] block, the two mains, the 8-inch and the 6-inch would be contained in one trench.

By Mr. Donnelly:

The trench would be the width of the two mains less the amount they overlap. It would be 5 feet at the east house line of Mercer Street back to the centre of the block. They are the widths we use right along and the widths I have taken in making up this appraisal. The average width that I assumed in my reproduction cost as to the width of the trench for the 6-inch main, including all excess width of any character, is two feet six inches. The width of the 30-inch main is five feet six inches. The width of the trench for the 8-inch main is three feet.

The trenches that would be dug for the mains on that block between Broadway and Mercer Street on Third Street would be all at different depths. The depth of the trench [fol. 741] for the 30-inch main, an average 30-inch trench, is three feet, plus thirty inches plus twice the thickness of the 30-inch pipe. In this case it is not the average depth because it is at one point six feet three inches deep. The average depth for any main which I have used can be obtained by taking the inside diameter of the main, the nominal diameter of the main, plus twice the thickness of the pipe, plus the normal cover of three feet. I have taken the average trench depth throughout the Borough of Manhattan for each size main. In the mains of different diameters, the depths of the trenches are different for the different mains. A 6-inch main would have a trench three feet six inches plus twice three-fourths of an inch or three feet seven and a half inches—that is exclusive of the under-cut for the bell hole. All the extra cutting for bell holes and for test holes and the holes that are necessary in cutting for timber bridges, and things of that character, is a percentage added on to the net total excavation of ten per cent. The third size is the 8-inch, which is two inches deeper than what I have given you for the 6-inch, three feet nine and a half inches. The depths vary in each block but they average three feet of cover. The room in the street,—that is the

presence of more or less sub-surface structures—determines the variations of the depths. Third Street between Mercer and Broadway is one of the most crowded blocks in the City. There are duct lines belonging to the Consolidated [fol. 742] Subway Company, duct lines of the Empire City for the telephone and low tension current of various sorts, a sewer in the block and high and low pressure water mains. There are catch basin connections at the corners and service boxes and service lines in addition to the other subway lines for electrical consumers. The size of the sewer is not one of the conditions that determine the variations in the depth of the trenches unless it is shallow, but the size of the manhole coming up from the sewer sometimes determines that. Those sub-surface structures practically fill up the street between the curbs and in that particular street, and practically in all that section of the town, they are right up against the curb and go across the street continuously. There undoubtedly is an electric service line with the service boxes up against the curb on either side of the block between the curb line and our mains.

The exact physical location of every sub-surface structure in Manhattan can be obtained by inspection and such information is shown on the street surface. The electric companies and your own City department keep data on cards with reference to the location of the various sub-surface structures in Manhattan. The Consolidated Gas Company does not have that data to inform it when it is about to locate a main as to the character of the sub-surface structures in the street, practically anywhere in Manhattan a man would be utterly at sea unless he dug test holes before [fol. 743] he laid the main. The sewer in that block should be in the center of the street but water mains are usually laid on the north side of the street, high pressure water mains are laid on the opposite side, wherever they are able to find room. The water department make anybody move that is in their way and in this section of the City they have vaults which are rented from the City by the property holders, that extend out beyond the curb line in cases and in some cases to the center of the street. That vault condition exists from the Battery pretty well up to 59th Street. I would not say it is a frequent occurrence between 14th and 59th Street, but it is by no means an isolated occasion, be-

cause we have found blind vaults and asked the City to have them filled up.

I do not know when all the five mains on that block were put in, but I happen to recognize the 30-inch main, and know that was laid in 1904 at which time I was connected with the company, and had something to do with the laying of it.

All of the mains of the gas companies on Manhattan Island, as shown on this set of maps, are under my direct control, except the men, or the employees, working on them in keeping them up to date. They are draftsmen in the drafting room and they are under my control to the extent that they are assigned to me to correct these maps while they are on that work. At the present moment I have three or four girls (who might be called draftswomen) and probably two or three draftsmen working on them.

[fol. 744] Those store yards, that I have mentioned, are the only places on Manhattan Island where we store the pipe, but there is one place where we are storing it for the moment, in back of the old Inwood holder, where some 30-inch pipe is stored that was left over from a job up there, but that in no sense is a store yard.

I keep a record of the cost of laying mains for the subsidiary companies and also keep a record of all services laid for the Consolidated Gas Company and for each of the subsidiary gas companies. The work in keeping up the records of services of the Consolidated Gas Company is done by a great many different men who do a great many other things. A portion of our clerical force in the general office and also a portion of our clerical and other forces in our district street departments are engaged in that work for a portion of their time each day or each week. The street department men do the street department work and all of our clerical force may be assigned to that work for a part of a day or for part of an hour. In each of the three districts there is the chief clerk, in some branches two and some branches three district draftsmen, an assistant superintendent and a superintendent, who are doing that kind of work. Then you come to the general office and you have myself, who may have something to do with it, my immediate assistants and my own clerical force in that office.

As I stated some days ago, the number of services laid, [fol. 745] repaired or altered or withdrawn from service in

each one of the three districts is sent to me monthly in a signed report sheet by the District Superintendent. Those signed reports are the basis of the entries in Plaintiff's Exhibit 267. This has been the practice for many years—back in 1895, certainly. It comes in in the form of written reports and is kept in the book in evidence. The same thing holds true with regard to the manner in which the record pertaining to mains is kept up and there is the same character of report and Plaintiff's Exhibit No. 266 I believe in that case is the book in which the data which has accumulated in the years of its history is kept statistically, but the data from the sketches also is placed upon the maps which you have seen.

We have no card system showing all services owned by the company. To locate a service when it is to be repaired, you go into the house and you can see it. If you look along the curb, you can see the service box, the valve box.

We have not been buying steel pipe recently principally from the Reading Iron Company as they do not make steel pipe, they make wrought iron pipe. No steel pipe has been purchased by the Consolidated Gas Company for my department since my connection with them in 1904. Some wrought iron pipe is bought from the Reading Iron Company and some from the A. M. Byers and some from the South Chester Tube Company. Some deliveries may be made at the 21st Street dock and some at the 17th Street [fol. 746] dock. A dock at the 21st Street dock has been used from time to time for the receipt of deliveries of pipe.

With reference to Plaintiff's Exhibit No. 268, I made no assumption that I would start laying the mains or would finish the laying of the mains on June 1, 1923. The construction of this main system could not be done economically in less than two years. To my knowledge it is not the intention of the Consolidated Gas Company to reproduce this entire main system. Under whatever theory this main system would be reproduced, this pipe would be delivered whenever we needed it and in such quantities as we required it. It is not a fact that in 1923 the United States Cast Iron Pipe & Foundry Company and others were offering concessions as high as three dollars per ton to purchasers who would take delivery in the winter months of 1923-1924,—the pipe foundries never made that known to me. I do not recall at the moment whether we took de-

livery of cast iron pipe from the United States Cast Iron & Foundry Company in January, 1923. I have no recollection of when each individual length came in or each shipment came in. There is nothing, except the elements, to prevent us from taking delivery of pipe in the winter months and we would be glad to get it, if we could, but the foundries are the ones that prevent it. I do not recall any such figure as $38.50 a gross ton paid for pipe that was [fol. 747] bought from the United States Cast Iron Pipe & Foundry Company on January 2nd, 1923. I do not state that any 6-inch cast iron pipe was purchased in January 1923 from that company but the freight rate at that time was $2.60 from Burlington, New Jersey. It is possible for pipe to cost one price one week in a month and another price another week in a month but there should be no great variation. I know of no 6-inch cast iron pipe purchased as of January 27, 1923 at $53.60, you have evidently confused December 27, 1922, which is the date and the price then was $56.10 per ton including the freight. I cannot substantiate that on 150 lengths of pipe of 6-inch diameter, paid for on February 27, 1923, the weight was 43,426 pounds. I do not know anything about pipe which you say was paid for on February 27, 1923 and which agreed with the specifications,—in so far as the weight of the pipe is concerned,—of [fol. 748] the American Gas Association. The 6-inch cast iron pipe made by the same company varies in weight from time to time in accordance with the allowance in the specifications and that is the only variation that we would pay for, but that is not necessarily the only variation there would be.

By the Master:

There may be variations but not paid for by the company. The acceptance is a matter for the inspector. If it is very good pipe it may weigh a little more than the specification weight for that pipe, and still be good pipe, but we only pay for the specification weight; in that case we are getting a little more weight for nothing more.

By Mr. Donnelly:

I have no recollection of a delivery from the United States Cast Iron Pipe & Foundry Company on January 11,

1923, of 100 lengths of six-inch bell and spigot uncoated pipe and since all of our pipe is uncoated, that is the only thing which is familiar to me.

[fol. 749] Lengths sometimes vary 100 lengths would equal approximately 1,200 feet. The length of pipe might be 12 feet 4½ inches long but it would lay only 12 feet, because it enters the bell four and half inches. I have no present recollection of a shipment weighing 30,768 pounds per foot, and I cannot tell you from anything I have here, if the company paid for 36,922 pounds. I cannot tell from anything I have here, if we ordered 115 lengths of six-inch bell and spigot gas pipe from the United States Casting Pipe & Foundry Company on January 2, 1923. The storekeepers and superintendents, in my department, check the invoice weights on delivery. I cannot tell you from recollection if 100 lengths of six-inch bell and spigot uncoated pipe were ordered from the United States Cast Iron Pipe & Foundry Company on January 29, 1923 and I have nothing here to refresh my recollection. I could not give you any *any* details as to what 100 lengths of 6-inch pipe weighed.

The bell and spigot pipe without the qualification "Uncoated" is coated with a tar dip coating,—like you see on water mains, a black coating—and the uncoated pipe is not coated. The coating in a water main is to prevent tuberculation on the inside and it is put on the outside because it is easier to coat the whole pipe than to try to coat just the inside; on a gas main the coating would be detrimental and is not used by us.

[fol. 750] I cannot tell you from recollection if 90 lengths of six-inch bell and spigot uncoated pipe were ordered from the United States Cast Iron Pipe & Foundry Company on January 30, 1923. All lengths of pipe are nominally 12-foot lengths but they may run from 12 foot 4 to 12 foot 7. I cannot tell you from recollection or from notes whether we ordered 85 lengths of 6-inch B. & S. bell and spigot uncoated pipe on February 9, 1922, and I have no data as to the weights received and paid for.

The price of 8-inch cast iron pipe paid by the Consolidated Gas Company between March 29, 1923 and September 6, 1923 rose on a fair curve and was certainly higher at the latter date. Very often there is a difference in so far as price is concerned between 6-inch and 8-inch pipe as was the

case on June 1, 1923. There should not be any difference in the average weights of 8 inch cast iron pipe made by the United States Cast Iron Pipe & Foundry Company at Burlington, New Jersey, as compared with Anniston, Alabama, since they are made on the same specifications and inspected by the same inspectors.

[fol. 751] I have listed 1,198 feet of 1½-inch cast iron mains on Plaintiff's Exhibit No. 268. I never have laid any 1½-inch diameter cast iron mains. I obtained the amount of 1½-inch diameter cast iron mains shown on Exhibit No. 268 from Plaintiff's Exhibit No. 266, which is the main record book, and the earliest date in that is November 11, 1884—in the series of books making that up; not in that volume. That entry in Plaintiff's Exhibit No. 266 as of June 1, 1923, is shown on the page for June, 1923, under the heading "1½-inch" 1,198 feet, previous month, 1,198 feet total, and the basis of the entry are previous entries, pluses and minuses, made to the current mileage, giving the mileage of that size of the pipe, going back to November 11, 1884. With the exception of certain portions of pipe which have to be made of wrought iron for special reasons, the great percentage of all the mains is cast iron, and the system is a cast iron system. There are no steel gas mains, but there may be pieces of pipe that are of steel. Where there were repairs made and it was necessary to go around a manhole, for instance, where we have some special pipes and not enough room to put in a cast iron special, the [fol. 752] special in the particular event has to be wrought iron. I did not compute in my working papers or other data, the amount of wrought iron and steel that is in the main system. We continually furnish such data as to the mains and services to the officials of the company. I have no present recollection of furnishing information to the company that I laid 563 feet of 4-inch wrought iron main in 1922. My recollection would indicate that we undoubtedly had, as we lay small pieces of wrought iron pipe as specials in our system continuously. It is a part of the main. The wrought iron is a special in the cast iron system.

By the Master:

I have no present recollection of having used in 1922 any wrought iron pipe in laying mains except as specials.

By Mr. Donnelly:

I have no recollection at this date as to what I specifically [fol. 753] furnished the company in 1922 for individual sizes of mains, neither do I remember how many feet of wrought iron mains embracing twelve different sizes was laid during 1922, but I know we did not lay as many as 110,302 feet.

With reference to Exhibit No. 268, there is a difference in the cost per foot in the ground between wrought iron, steel, or cast iron mains. Wrought iron mains are the most expensive, cast iron the next in some sizes and steel the least expensive in some sizes and more expensive than cast iron in other sizes.

By the Master:

The books show all the mains that have been retired since 1884.

By Mr. Donnelly:

There have not been steel mains at any time in the Consolidated system, but there are portions of steel pipe built up into the shape of specials and just straight runs of steel pipe where there is not any room to get cast iron pipe in, but these are specials. The 1,198 feet of 1½ inch mains listed in my appraisal, Plaintiff's Exhibit No. 268, was and is used and useful. There is one stretch of inch and a half main that runs on 110th Street from Amsterdam Avenue to the old Synod house at St. John's Cathedral [fol. 754] and there is some inch and a half main down at the Fort Lee Ferry, supplying the lunch stand there at the left hand side or south side of the ferry, but I cannot give the length nor the specific run in each case from memory as they were not installed at any time since I began my association with the company.

We have had no serious difficulty with our mains from electrolytic action in the Borough of Manhattan, but, in the Borough of the Bronx, there has been current flowing, on the 48-inch main, but no damage has been caused by that. Let me make that perfectly clear,—there have been places where we have had trouble, from electric current, local

trouble, but that is not what is generally understood as electrolysis, which is the return of current, we will say, from some source of electricity returning through the ground and traveling on the main. I believe there are reports of tests in the office going back to 1910 and 1911; there may be reports of tests going back to 1905, and maybe further than that, but we do not consult them as we are not interested in what may have been the case in 1905 but, we are interested only in what is the case today. I never made any records of tests,—those tests are made by electrical experts for the information of the Company and my information as the head of the Company's Department of Mains and Services, and I am familiar with the present day results—1924, 1923, and 1922—in so far as they concern Manhattan and the Bronx. Those tests do not show any damage done to the main system as a result of electrolysis.

As a general proposition it has been the practice of the [fol. 755] company to lay as large a main as it can conveniently get in the street to take care of the consumers. I have listed in Plaintiff's Exhibit No. 268, 101,403.63 feet of 3-inch mains in Manhattan. I regard every foot of the three-inch mains as used and useful. It is not the consensus of opinion among engineers for gas companies having charge of distribution systems to regard three-inch mains as obsolete.

There is a great difference in the labor cost of laying mains between the Boroughs of Manhattan and Brooklyn, since there is no rock in Brooklyn and the sub-surface structures are not so numerous, the material to be excavated is very much easier to excavate than in Manhattan, and the amount of traffic is less.

There is a difference in the cost of the material in Manhattan as compared with Brooklyn in so far as what the Brooklyn Union could buy for and what we could buy for,—or whatever other Brooklyn company you might have—and also they may use different materials than we use for a special kind of main. For instance, the Brooklyn Union Gas Company has more cast load joints than we have; they use a somewhat different character of specials than we do and their practices are not exactly similar to

ours. I acquired my knowledge on the latter subject from conversations with people in Brooklyn, with the chief engineer of our company, with people in our company who know the Brooklyn practice, and I have had some conversations with Mr. White in the past years.

I do not believe I have read all of Mr. White's testimony before the Special Master in the pending Brooklyn Union Gas Company case, but as a general proposition I read it [fol. 756] over casually as there were volumes of it in the office of the Consolidated Gas Company. I read it out of curiosity to see how somebody else handled the same sort of subject, but I did not read it for the purpose of familiarizing myself with the prices of labor, the prices of material in laying mains and installing services and the conditions under which those prices were incurred, since the only price that I was interested in was the price of their cast iron pipe.

Referring to the 12-inch cast iron pipe shown on my appraisal, Plaintiff's Exhibit No. 268, my figures for joining material for 12-inch cast iron, Manhattan, are lead wool, $.041; cast lead, $.117; yarn, $ 018, which totals $.176. The only difference, between the character of the joining materials used for the 12-inch cast iron mains in Manhattan as compared with material used for mains of the same diameter in Brooklyn, is that the Brooklyn Company may use all cast lead, and we have a portion of cast lead and a portion of lead wool. The cast lead and yarn is not as good as is used in Manhattan.

The City inspection, on the part of the Highway Department, is regulated by the Borough President and also the Department of Water Supply. The Borough President has to do with the inspection of the pavement, the back fill of the cut, the mains and other things, and you can not lay a main without the inspection by the Department of Highways, and if you are running along a park, for instance, you will also have a park inspector put on the job.

[fol. 757] I have laid five or six or seven or eight miles of distribution mains in a great many different years, up to thirty miles of mains in large sizes but some of these were transmission mains. I have laid many stretches of distribution mains as much as three miles long, as in 1910,

for instance, we laid two 36-inch mains, which took most of the summer.

The method of laying pipe as of June 1, 1923, included in Plaintiff's Exhibit No. 268, is as follows: the pipe would be placed in the trench from sizes of 12 inches and up by derrick, and the smaller sizes by rope slings. I have assumed all of the pipe would be hauled from the point of delivery to the trench. In the joining of the cast iron mains, I used cast lead to the extent that it is now in the mains and lead wool to the extent that it is now there. We have never laid any cement joint pipes in Manhattan. I do not recommend the use of cement in Manhattan and the Bronx because I do not consider that the cement joint is a safe type of joint to have in a thickly built-up community, the reason for that being that where there is a tremendous street traffic and a tremendous underground disturbance, as we have in Manhattan and the Bronx, a rigid type of joint like a cement joint will break or else if the joint is a really good joint, the pipe will fail first and the crack in the pipe will give a great deal of trouble with leaking gas. We have never made any experiments with the use of cement in joining mains in Manhattan, Bronx, or outlying sections of the Bronx, on any mains of the Consolidated Gas Company.

The difference between a pneumatic rammer and the Staley tamper is that the Staley automatic tamper is a machine that is on runs, spans the trench and has a big shoe [fol. 758] that is alternately raised and lowered, while the other is a pneumatic rammer with a long bottom, with a hose connected to it running from the compressor. The Pauling and Harnischfeger Co. also put out a tamper. In Exhibit No. 268, I have figured on tamping the dirt back into these trenches, by a process of hand tamping up to the point where the pneumatic machinery could be used. We used a Staley machine up at the 11th Street yard, but discontinued the use of that six or seven years ago; it was not satisfactory. In making up Plaintiff's Exhibit No. 268, I figured the ideal condition of hauling away the amount of dirt which was displaced by the pipe. The use of the tamping machine does not obviate the necessity for hauling away some of this dirt, as you can not put the dirt back any tighter than it was there and we are merely taking

out the cubical contents of the pipe itself. The tamping machine is not as economical or good as the pneumatic rammers, for it is a big bulky, heavy machine and came out at a period when compressors had not been brought up to the stage they are now.

I contemplated no particular time for laying any of the mains. If the weather conditions permit, we can lay mains in the winter months just as cheaply as in the summer. [fol. 759] Some years ago, before 1913, a frost cutting machine was designed by Mr. Simpson, Sr., in conjunction with Reginald Muir, but never used in main laying. There is no part of my territory in Manhattan in which I have used trenching machines for digging the trenches, but in the Bronx, in laying the 48-inch main on the section of Morris Avenue known as the Black Swamp, we experimented with it but it was not successful. We also tried it on the 20-inch main in the Bronx, and we destroyed more of the structure of other people than we saved money in laying; on Morris Avenue it was sub-surface conditions and on the 20-inch main it was sub-surface and above surface conditions, because we knocked down some electric light posts and so forth. I made no investigation of the cost of doing the trenching work by the United Electric Light & Power Company, which was digging some trenches for conduits leading to the works of the Bronx Gas and Electric Company back in 1920,—I knew by hearsay that they did that.

I did not figure that I could sell the rock taken out, you have to get rid of it at a loss. I have not in my experience known of the rock being sold, but there have been some of *some* cases in the upper end of the 20-inch main laying where we were able to pile up a little rock alongside the trench and find it gone in the morning, where people would take it away, but we could never sell it. I do not know that there usually will be no difficulty in replacing the material [fol. 760] removed for mains of eight inches and smaller, with the proper rammers and shovelers, in fact, it is just the contrary. Each foot of main shown on exhibit No. 268 is put under ground by means of a trench and it may lie with another main in the same trench,—there are quite a few cases of that.

As a general proposition, I have used cast iron for laying mains over bridges, where we could, rather than steel. My present recollection is there is only one bridge in the Manhattan territory, somewhere on Park Avenue north of 96th Street, which has a gas main across it. The bridges that cross the Harlem River swing open, except the bridge for the Aqueduct, and the High Bridge, and we have no mains on those. In the Bronx, the 48-inch main at Morris Avenue and 156- Street crosses on a special bridge that had to be built by the Company for the main over the railroad cut. North of that, on 179th Street, the 36-inch main crosses on a bridge we reconstructed so we could put a flat cast iron box under the bridge for the purpose of carrying the main over. Quite likely there is a gas main on the bridge on 149th Street, a little bit west of Park Avenue, crossing over the railroad cut at Mott Avenue, but not one of the Consolidated Gas Company's. When a main is laid on a bridge, we use cast iron pipe with lead joints, for if you put too rigid a joint in, you may have a break in one of the joints and the lead joint has to contract and expand and the vibration and changes in temperature do not lead to the leakage of gas.

[fol. 761] We would dig a three foot trench for a 12-inch main, as shown on Plaintiff's Exhibit No. 268, for the total length of mains, taking into consideration, of course, any time where the 12-inch main migh- coincide with the location of some larger or smaller main, it might lie in the same trench. In speaking of a 12-inch main, it would be a more expensive practice than mine to have a width of 2.33 feet for a distance of 8 feet and the balance of the 12-foot length around the bell-hole 4 feet in width, and it would not be a good job.

My schedules give the cost per cubic yard for hauling away surplus dirt taken from the trenches. A two and a half yard wagon will haul only two yards of excavated material, because, when it becomes loosened, it takes up more space. The cost per load of hauling in Manhattan would be $1.60 per cubic yard, which includes the dumping charge, and in the Bronx $1.50. In Manhattan the haul is shorter and it costs 60 cents per cubic yard to dump it, whereas in the Bronx there is a little longer haul, but you can dump for 25 cents a cubic yard. With reference to the per cubic yard price, which is what my figure is

based on, the hauling to dump in Manhattan with a team and a driver, and a 2½ yard wagon, would cost $12 per day of eight hours. The cost to dump material on the scow is $1.20 per load, with two yards in a load,—therefore, $1 for cartage plus 60 cents for dumping is $1.60 per cubic yard. [fol. 762] There are no public dumps in Manhattan. The reason for the difference in the cost of hauling away in the Bronx, is that you have the same cost for the team, you have a haul of two miles and you have only four trips a day, as much as they can make on a two mile haul, so that you have $12 divided by 4 times 2 or 8,—or $1.50 per cubic yard, but that does not include the dumping charge of 25 cents, so that the total figure is $1.75.

During 1922 we had a contractor remove all surplus dirt on the 20-inch main in the Bronx and it cost us $2.44 a yard, as against the $1.60 that I have given. Where we have laid gas mains in Manhattan and the Bronx, our own men in a great many instances have loaded the trucks, but the operation of the trucks, is done by some subcontractor. The Consolidated Gas Company has no auto trucks which could be used for the disposal of excess material without changing the bodies considerably.

When we laid the 20-inch main under contract, in 1922, the contractor did the excavating and back-filling and we did the pipe-laying, caulking and supplied the pipe. The New York and Queens Gas Company lays mains under contract and the New York and Richmond Gas Company on Staten Island have contractors working on their high-pressure and they lay most of their low pressure themselves.

We did not inform the companies from whom we sought the prices of the pipe included in Plaintiff's Exhibit 268 of the purpose for which we intended to use the information, we merely asked for price for pipe as of that date.

[fol. 763] Only a short period of time elapses between the time when negotiations are entered into for the purchase of pipe and the time when the contract is made for the pipe, as I have to wait for a consultation with reference to a bid, and some time must necessarily elapse before the bid is awarded to whomever eventually gets the contract. I believe all the pipe that the Consolidated received in May, June and July, 1923, was delivered under one contract by the United States Pipe & Foundry Company.

[fol. 764] New York, March 24, 1924.

Met pursuant to adjournment.

COLIN C. SIMPSON, JR., a witness in behalf of the plaintiff, resumed the stand.

Cross-examination continued by Mr. Donnelly:

From my recollection, without having the 730 main maps physically before me. I cannot give you the specific number of mains shown in one particular block. On every avenue we necessarily have two mains, one on each side and in some instances in a great many blocks more than two. You have these mains that carry gas a certain distance away and serve no consumers en route. I am not talking about transfer mains in this case. But they, of course, must be paralleled by a main serving a consumer in that particular block, and this other main passes by. Then you have cases where there are mains back of the subway ventilators supplying consumers, and the main out in the street cannot supply them because the services cannot get through the ventilator.

I do not recall at the moment that we have ever made, or ever attempted to make, a contract for delivery of pipe over a period of delivery longer than one year. It would take a period of at least two years to lay these mains included on Plaintiff's Exhibit No. 268. You could not do it economically in less than two years. As far as each gas company in the City of New York has prepared estimates of the cost of laying all of its mains as of June 1st, 1923, for the purpose of contesting this statutory gas rate is concerned, every gas company in the City of New York is not a matter within my knowledge. I could not give you all of them. I do not know how many or what they are. I [fol. 765] do not think I could recite them all without leaving out at least three or four. I do not think the Brooklyn Union is going to lay any thousand miles of main at all, I know from hearsay only. I never was present at any hearing of the Brooklyn Union case any time, anywhere. I figure we would have to lay approximately 2,154 miles for the Consolidated Gas Company and its subsidiary gas companies, eliminating the Westchester Lighting Company, if these properties were reproduced as of June 1, 1923. I do

not know whether the pipe manufacturing companies who could deliver pipe into New York City have facilities for manufacturing the total tonnage of mains that would be required to be laid if all the mains were reproduced as of June 1, 1923. I am quite certain, from what I know of the pipe companies in general, that the pipe foundries of the country of the United States, could absorb such a tonnage. I think all the pipe manufacturing companies within the confines of the continental United States, if they were called upon to cover 2,154 miles of pipe as of June 1, 1923, could fill the order. That is not based upon any actual experience of reproducing 2,154 miles of pipe as of a certain date. I would make the same answer if I were asked to take a period of three years. If they were called upon to reproduce that amount of pipe, namely 2,154 miles of mains, they could make the pipe within a period of two years, or probably a little less than that. I do not know how much less, it [fol. 766] might be done in a year. There are, undoubtedly, pipe manufacturing companies other than those I have already mentioned, who supply pipe to gas companies operating in the City of New York, for instance R. D. Wood, located at Florence, New Jersey. We have not had any large orders from them and I have no present recollection of small orders from them within the last two or three years. I do not know outside of those four I have mentioned, how many other pipe companies there are available for sending cast iron pipe in New York City. Those companies just mentioned also make water pipe. I have not visited all four,—the United States Cast Iron Pipe & Foundry Company, the Warren Company, the John Fox Company and the R. D. Wood, but I have visited the foundry of the United States Cast Iron Pipe & Foundry Company sometime in 1912, 1913 or 1914, I cannot place the date or the year any closer than that, and spent quite some time there. I do not know what the capacity was per day of the Cast Iron Pipe & Foundry Company, expressed in tons, on January 1, 1922, June 1, 1923 or January 1, 1923. I had some conversation with Mr. Stokes, the general sales manager of the United States Cast Iron Pipe & Foundry Company, when he stopped to see me in New York, at my office. Nothing about the capacity came up at all, what I was interested in doing was bawling out the United States Cast Iron Pipe & Foundry Company

for the deliveries they had made to date, and that was the principal line of inquiry. My conversation with Mr. Stokes [fol. 767] on that subject, may be expressed briefly in this way: "Say, Stokes, while we are talking about this, suppose I had a 180,000 tons to order, how would you like an order like that?" He said, "We will take it, I do not know what we will do to you on the price. It would be a mighty nice order, and of course we are out to get the business." I did not ask him then what period his concern would undertake in which to deliver us that tonnage of pipe, the inquiry was merely a joking reference to this rate proposition, as he was leaving the office. It did not have to do with the capacity of his concern to furnish that tonnage of pipe within any stated period of time.

It would be possible to purchase the pipe to reproduce the number of feet of mains expressed on Plaintiff's Exhibit No. 268, as of June 1, 1923, in my opinion, and secure delivery within two years. I base that statement on my general knowledge and also the statement that Mr. Stokes made that he would be glad to take such an order. I think it was his understanding at the time he expressed the ability of his company to deliver that amount of pipe within a period of one year after the order was placed. I do not recall that he definitely said so. I have no present recollection that I gave a time period at all. Mr. Stokes is the one connected with the foundry with whom we usually do business now, but they have a local man—I think his name is Mr. [fol. 768] Richards. When the business is done through the local office, the conversation leading up to the order may be with the local representative up to the point where it actually comes to drawing the contract, when Mr. Stokes may then come to New York.

The period of two years as the period within which it would be required to do work of laying mains, referred to on Plaintiff's Exhibit No. 268, economically, is merely my judgment, my opinion of the shortest possible time you could do that economically, based on my experience in main laying in the City of New York. I have nothing more than my judgment on which to base the period of two years in which the five million and odd cubic feet could be laid. The two years does not enter into my figure at all. The unit prices for labor were not based upon the average condition,

the unit labor costs per foot are based on the average condition. In making up my Exhibit No. 268, I made absolutely no assumption anywhere as to any number of men that would be employed in digging the trenches for these six inch mains. It is not a fact in laying a six inch main, that a trench is first dug for one length. A trench is dug for the main, it progresses continuously, of course, and may be dug a block at a time, but certainly never in the nature of a length. Anywhere from three to one hundred men are employed in the digging of a trench for a six inch main. One block to dig a trench for a six inch main. I think it was somewheres in the seventies, during 1914, in [fol. 769] the process of doing paving work, we had to put in a main with that number of men on Manhattan. I will have to figure how long it will take for three men to dig a trench for a six-inch main in one block under average conditions. Working under average conditions, leaving the rock out of it and taking the earth excavation only, including back fill, it would take three men 21 days to dig a trench,—working eight hours a day; without back-fill, 14 days. It would require more men for digging trenches of a diameter greater than six inch. The ratio would be based on the cubic contents of the trench. The excavation figure which I have given is $3.60 per cubic yard. On a six inch or any other size main there is a certain quantity or percentage of a cubic yard per foot, and that part of a cubic yard multiplied by the price per cubic yard gives the cost of excavation and back fill per foot of main. $3.60 is the cost of excavation and back filling a cubic yard. $3.60 divided by $4.80 labor rate per day or three-quarters roughly, in other words a man could do one and one-third cubic yards of excavation and back-fill in a day on the average. In addition to the labor which is employed in digging the trench there is labor likewise employed in laying the main itself and in caulking the joints. Outside of the caulkers and the yarners, and foreman, skilled workmen are employed in laying the main itself. The bed blocks which are used, is second-hand lumber that is usually cut up. The dealer will cut it up for you. The ready-made bed blocks [fol. 770] are of new lumber and cost considerably more. To lay a six inch main ideal conditions, it would take six good pipe men,—they lay about 500 feet of six inch main

in a day, or two avenue blocks, caulking is in addition to that. That is provided the trench is all clear for them and all obstructions and everything is wide open, but subsurface structures where they have to snake the pipe underneath would delay them quite a bit. The average condition would be about three-quarters of that figure, probably for the average in the city. In 500 feet of six inch main you would have 50 joints requiring 25 hours of caulking,—that would be three caulkers in a day and one man would get an hour overtime. In actual experience, we do not have caulkers or yarners; our men who caulk the joints may be doing other work. Additionally, you have to get your subsurface structures all of the way before the pipe is laid: you have to put some lumber in to hold up the curb; you have to put [fol. 771] pedestrianer traffic bridges across; you have to take away a certain amount of excess material, and you have to trench the pipe to the job.

Within the past seven or eight years I laid five mains at one time in Lafayette Street, at a point that was about 80 feet wide. At 46th Street across the Grand Central Viaduct, there were three 16 inch mains laid simultaneously. The mains laid in Lafayette Street were 12 inch distribution mains.

I had charge of the laying of two cast iron mains in the Astoria tunnel in 1915 and 1916 and those mains were then and are now the largest gas mains in the world. I made no appraisals of the mains and services of the Consolidated Gas Company on the transfer system, in connection with the rate litigations in 1919 and 1920.

We inspect pipe as delivered and check the fittings by sounding the pipe with a hammer. In pipe manufacture as a standard proposition the inspector passes it. Unless the [fol. 772] pipe has been cracked, there is no other defect that bothers us at all in the laying. The fittings are a different proposition; they are much harder to make and they are subject to irregularities in contour. We check the inspector's marked weight, which is inside the pipe, the inspector sends in the number of the pipes and the weight accepted. At the foundry about 25 to 30 per cent of the pipe has been found defective and rejected. The same thing does not happen at the store yards of the Consoli-

dated; it is very rare for us to reject pipe, and then only because it has been cracked in handling.

I keep a record in my office of the openings made each day in the streets for the purpose of uncovering the mains, of where all my men are working, and a copy of our permit application indicates the exact opening that we desire to make. Also our labor tickets indicate the exact area of every opening made. The City allows us to keep open trenches until we finish, but for instance when we are working on Fifth Avenue and there is to be a parade, they ask us to please temporarily fill in the openings so as not to interfere with the parade.

In February 1924, we had to open the streets on the north side of Chambers Street at its junction with the west side of Broadway, for probably six or eight days on account of a broken main there and the ground was frozen. It was probably opened twice again near that location,—at the east side of Broadway north of Chambers Street and on the opposite corner on the Chambers Street side and I personally inspected the openings.

[fol. 773] This main record book is Plaintiff's Exhibit No. 266, which was under my supervision approximately from 1910 to date, with the exception of the time that I was absent in France. While I was in France Mr. Travis, my assistant, was appointed acting general superintendent of mains. Plaintiff's Exhibit No. 266 was opened in 1884 with entries of a list of mains on the basis of the Rowland appraisal, which was the appraisal of the property of the constituent companies which made up the Consolidated Company previous to consolidation. This Exhibit includes such of the mains of the Mutual Company as were still in the ground when this company was taken over by the plaintiff in 1922. I have no personal familiarity with the books of the Mutual Gas Light Company showing mains which have since been incorporated in the main record book of the plaintiff, but I have considerable personal familiarity with the mains and knew where they were and also the total they had, such knowledge being based upon my experience with the Consolidated Company and the survey that we have made of the mains in the city and the main maps that shows all the Mutual mains. By that I mean the location, the diameters, the lengths and the character

of the mains themselves. All this data was put on the maps. I do not keep a separate main record book for each of the gas companies affiliated with the Consolidated, I have their mains on the map, their mileage of each size and the net additions and deductions from those companies. They [fol. 774] keep their own book record comparable to this. The basis for the entries in Plaintiff's Exhibit No. 266 relating to the so-called Mutual mains was my inventory of the Mutual mains as of October 1, 1919, which information was taken from the maps of the company and from the running records which we had of the number of feet of mains and the various sizes, in the ground by months. The running records were made each month from date submitted by the district superintendents of that main transactions for that month. As he did work, he would either take out or lay a main and there was practically no Mutual main laid, but there has been main taken out, altered or abandoned, etc., and that all came in on monthly reports. The territory covered by the Mutual was roughly from about State Street to 66th or 67th Street in Manhattan, First Street to 67th Street in Manhattan, river to river. I do not keep a book record of the pipe, specials, fittings and valves as distince from the mains themselves. Plaintiff's Exhibit No. 266 relates not only to the pipes in the main, but likewise to the pipes, specials, fittings, valves and pavement, which is all a part of a main.

I believe we have laid 3-inch wrought iron mains since 1910. These mains were probably for repairs or specials. A main of that sort would probably be a main that had to go between a manhole or behind a ventilator, as a special [fol. 775] extension. We did not lay any 3-inch cast iron mains in 1911. We did not lay 14 feet of 4-inch cast iron main in 1914, unless it was a replacement of a piece of a main,—that could be called a cast iron main, but if I replaced that, I would do it with a piece of wrought iron for a short stretch like that, but that would be a special. In December, 1919, there were 36 feet of 4-inch wrought iron main laid, as a special in the repair of the cast iron main, which had to be brought around a manhole. It is not considered good practice to put cast iron around there where there might be loose fill or too little room to get the main in. During the month of February, 1918, 14 feet and 6 inches of 4-inch main were laid and that was a wrought

iron special. If I were reproducing this main system today, I would have to put in exactly what is there now and I would lay 4-inch cast iron mains.

[fol. 776] I have no present recollection, that we have laid 2-inch cast iron mains since December 31, 1907; but we may have, prior to that date, we did lay some 2-inch cast iron mains. I don't know the date of any specific installations of 5-inch cast iron mains because I have not the data in my head. From December 31, 1907, to date, we have laid no 1½-inch mains; we may possibly have laid in stretches of repair work 2-inch wrought iron mains in place of cast iron that may have been broken up, as we do not keep 2-inch cast iron in stock. On December 31, 1922, it is quite possible we had over 3,000 feet of 4-inch wrought iron main in the ground put in repair work in place of cast iron. In 1922, some quantity of four-inch main was taken up in the process of laying a larger main, because the demand had increased in that locality. Plaintiff's Exhibit 266 does not state the instances where mains were taken up and replaced by other mains. In 1922, we abandoned and left in the [fol. 777] ground 5,915 feet of four-inch main, a great deal of which was abandoned in connection with the new Court House work, at Chambers Street. There were a lot of streets closed there and the mains had to be finally cut off. I do not know how long after they were declared abandoned, they were actually retired from service. The entry of abandonment is made in Plaintiff's Exhibit No. 266, in the current month. I furnished nothing directly to the president of the plaintiff company on which he based his report to the Public Service Commission for the year 1922, relating to the work of our Department of Mains and Services.

In so far as the mains themselves were concerned, each individual main report shows whether or not rock was encountered in laying that main. Our records indicate the kind of paving that was cut in laying the mains that were [fol. 778] put in, in 1922, in so far as the restoration of the pavement was concerned.

By the Master:

In some cases where the city is paving streets we lay the main in advance of that pavement being laid and if there is an old pavement there, we do not restore it but put a tem-

porary pavement back. Our main reports do not show the character of the soil encountered in digging trenches for mains, they would show whether a considerable amount of rock was encountered because then the rock man and the powder and other things would be indicated on the ticket and also the compressor, but small bowlders and things like that that were taken out by hand methods would not be indicated.

By Mr. Donnelly:

I have not seen the company's annual report to the Public Service Commission for the year 1922, in the sense of having looked at it and examined it.

No steel mains were taken over from the Mutual Company by the Consolidated Gas Company. I had nothing to do with the negotiations regarding the taking over of that [fol. 779] company, except that they may have used my appraisal of 1919 in the matter.

I think we get cast iron pipe as cheap and sometimes cheaper than, other gas companies do. We bought pipe from the United States Cast Iron Pipe & Foundry Company in 1923, but none of it was specified for delivery at any special time. The price for 20-inch cast iron pipe as of June 1, 1923, was $67.60 a ton delivered in New York. Plaintiff's Exhibit No. 268 shows 208,550.92 feet of 20-inch cast iron pipe in Manhattan. I do not know the capacity of the United States Cast Iron & Foundry Company, to produce 20-inch cast iron pipe expressed in feet per day. The weight per length of 20-inch pipe according to the specifications is 1,846 pounds and 2,477 pounds per length of 24-inch pipe. The allowable percentages of variation in weight according to the American Gas Association specifications is that no pipe shall be accepted, the weight of which shall be less than the standard weight by more than 5 per cent for pipe 16 inches or less in diameter and 4 per cent for pipe more than 16 inches in diameter, and no excess above the standard weight of more than the given percentage for the several sizes shall be paid for.

The maps of mains which were prepared under my personal supervision were designed in 1911 or 1912. Some of the maps which were kept prior to the time that I began to make them up are in my possession—one about the size of

this room has been upstairs for years and they were after me the other day to get it out of the building. In former years data was not kept as to the depth and curb location, on the maps, but contained the fact that mains were on certain streets.

By the Master:

On Fifth Street from the Bowery to Second Avenue, there is a point where the four-inch Mutual main lies above, in [fol. 780] the same trench, the six inch New Amsterdam main belonging to another company. Of course, in laying the Mutual main with the New Amsterdam main below it, you would have to excavate that far.

By Mr. Donnelly:

There are three mains on Fifth Street from the Bowery to Second Avenue, two of which are the Consolidated Gas Company mains. One trench would be dug for the two mains. The width of that street from curb to curb is 30-feet and the mains are all on the south side of the street. On that block at that east house line of Third Avenue a 4-inch Mutual main is 7 feet 10 inches from the curb, the 6-inch Consolidated mains 6 feet 6 inches and the 6-inch New Amsterdam main 4 feet 9 inches from the curb.

By the Master:

At a point approximately 350 feet east of the east house line of Third Avenue, the 4-inch Mutual main crosses over the 6-inch Consolidated. At the east house line of Third Avenue the trench will be the width there out to out of the two mains plus twelve inches on each side.

By Mr. Donnelly:

Prior to the time that the Consolidated took over the Mutual Company in 1922, they both supplied consumers with gas on 5th Street between the Bowery and Second Avenue. The map does not show a 4-inch New Amsterdam main and a 4-inch Mutual main on the south side of 6th Street from Third Ave. to Hall Place to Second Ave. and thence to First Avenue, Avenue A, B and D, but the 6-inch New Amsterdam main from a point approximately 300 feet

west of Avenue A to Avenue B. There is no New Amsterdam main from Avenue B to Avenue C, but a 6-inch New Amsterdam main from Avenue C to Avenue D and there is none beyond Avenue D. In making up my appraisal of Exhibit [fol. 781] 268, I assumed only one trench there for the one main. The width of 6th Street from curb to curb between Third Avenue and Avenue D is approximately 30 feet. The 4-inch main is in each one of these locations. 7th Street from Third Avenue to Avenue D shows two mains on the south side of the street and it shows a main on the north side of the street. In the block Hall Place over to Second Avenue shows two mains, one on each side of the street.

By the Master:

This is the biggest block on the map, it only has two mains, one on each side, from Lewis Street to Mangin Street there is only one main.

By Mr. Donnelly:

On Eighth Street from Sixth Avenue to Second Avenue on the south side of the street, there are two mains, one former Mutual and one New Amsterdam. For that whole distance there is a main either of the former Mutual Company or the Consolidated Company on the south side and also a six-inch main belonging to the New Amsterdam Gas Company.

[fol. 782] New York, March 25, 1924.

Met pursuant to adjournment.

COLIN C. SIMPSON, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination continued by Mr. Donnelly:

Referring to Map 169, one of the mains on 8th Street from Sixth Avenue to Broadway was owned by the Mutual Company before it was taken over by the Consolidated Gas Company and the other is owned by the New Amsterdam Company. There is a former Mutual main and the New

Amsterdam main on the South side of the street as far as Second Avenue.

With reference to Plaintiff's Exhibit No. 268, there is one trench for the Consolidated main on that block or blocks where those two mains are on the south side of the street. That is the way my exhibit was made up, on that assumption, that there would be one trench for the Consolidated main. There is no main of the Consolidated Company, other than the one I have given, on that side of the street. The New Amsterdam main on Map 169 with reference to the Consolidated mains, from Sixth Avenue to MacDougal Street, is south of the Mutual main; at a point approximately in the middle of the block the Mutual main is south of the New Amsterdam main; and at MacDougal Street the Mutual main is north of the New Amsterdam main. There is no trench there now. Two separate trenches would have to be dug for the reception of those two mains, otherwise you would have to leave the street open. I cannot say off-hand, when the mains were put in or which main was put in first. With respect to the block Sixth Avenue to MacDougal Street and on the south side, the 4" former Mutual now Consolidated main and the 6" New Amsterdam [fol. 783] main lie in very close proximity for probably 75 per cent of the length of the block. For the distance in digging a trench for the purpose of laying the second main, it would have to uncover the first main at the points where the mains cross, but not necessarily at the other points. The distances indicate to me they probably would not. In this particular block there is a peculiar condition of the New Amsterdam main being very shallow. The mains cross at a point 49½ feet each of the east house line of Sixth Avenue, 155 feet west of the west house line of MacDougal Street; and 45 feet west of the west house line of MacDougal Street. In the distances between the points, the one main lies right on top of the other where those points cross. There is not more than one main on the north side of the street between Sixth Avenue and MacDougal Street. The 6 inch Consolidated is on the north side of the street.

By the Master:

The average distance between those two mains on the south side of the street shown by the maps, the mains lie up against each other. In making this drawing, the hubs

are not represented and that means that the mains are the distance of the width of the hubs apart, that is, with cast iron mains one cannot have them any closer than one hub up against the barrel of the next pipe, and at places where there are two hubs there would be the outside diameter plus this distance. The inch and a half cast iron is a very small pipe. For that distance the hubs of the lengths touch each other or substantially so, except that the elevations of [fol. 784] the mains are not the same. There has to be caulking between the mains and that is taken care of physically here on elevation. The distance in the depth of the two mains is indicated just at the extreme ends of the mains, but there is a difference in depth of 2 feet 4 inches at Sixth Avenue and 1 foot 1 inch at MacDougal Street. The Mutual is deeper.

By Mr. Donnelly:

The three mains indicated on Map 173 along Tenth Street on the south side between Sixth Avenue and Fifth Avenue is a distance of nearly 919 feet. There is a 6 inch former Mutual, a 6 inch Consolidated and a 6 inch New Amsterdam main. There are three mains on Tenth Street between University Place and Broadway, the length there being about 671 feet; a 6 inch Mutual, a 6 inch Consolidated and a 6 inch New Amsterdam; that is the block between Sixth & Fifth Avenues. The block between Sixth Avenue where the three mains are on the south side, on Exhibit 268, the corner of Sixth Avenue would be one trench for the two Consolidated mains. That condition would obtain throughout the entire block up to a point approximately 20 feet west of the west house line on Fifth Avenue would be two trenches, about 20 feet in length. I have taken an average depth of 3 feet to the top of the main. For the whole thing, wherever any situation occurs our mains average 3 feet in depth. My appraisal is for an average condition. Where one trench would be dug for the two Consolidated mains it would be the same average depth, that is to say, the depth would not be any greater in the case of a trench with two mains than it would be in the case of a trench for one main.

[fol. 785] By the Master:

That is, the pipe would lie alongside of each other. If they were one on the other, it would make up in the average of 3 feet. In a particular case it would be so. In the one we referred to before that would be the case.

By Mr. Donnelly:

In the case where you put two mains into one trench, it would be narrower than if you dug individual trench for those two mains, narrower than the sum of the widths of the two individual trenches.

By the Master:

The width of the trenches contemplated to be dug where there are two mains as here is obtained, by taking the distance from out to out of the two mains and adding 12 inches on each side for caulking room and necessary sheathing and back-filling, and 12 inches is the minimum you can use for that. In building a trench for a single pipe line, allow 12 inches outside the barrel of the pipe. Now if I put two pipe lines in the same trench I would have to allow an additional width over one trench. The amount of the additional width I would allow would depend on how close the mains lie to each other. At a point roughly 200 feet west of the west house line on Fifth Avenue the total trench width for the two mains is 3 feet. The trench width for a 6 inch main would be 2 feet 6 inches and for two 6 inch mains laid in separate trenches it would be 5 feet. In making up my estimate of the cost in the case like that, I figured there would be one trench there 3 feet wide.

By Mr. Donnelly:

I am speaking of the block at Sixth Avenue on Tenth Street. One of those is a former Mutual and the other is a Consolidated main. The Mutual main is 3 feet deep and the Consolidated main is 2 feet 7 inches at that point. As you go along the block those respective depths vary a foot or two feet right in the block where you have a dip sud- [fol. 786] denly down to get in something; this is a plan and those changes in elevation can only be shown by a note, and we only show them usually at the intersection because

that is where we are going to dig to shut off the main. That is where we want to locate the main. The smaller mains are usually going up at the intersection, the larger mains doing down.

On map 175, along 11th Street between Seventh Avenue and Sixth Avenue there is only one main and that main is on the north side of the street. On 11th Street between University Place and Broadway, on both sides of the street, on the north side of the street there is a 6 inch New Amsterdam main and a 6 inch former Mutual main. On the south side of the street there was a 4 inch New Amsterdam and a 4 inch Mutual. They are dis-used and out of service. They are not in my appraisal, and there is a 6-inch Consolidated main which is in service and in my appraisal. That is three. The date is not on here when the mains were disused and abandoned.

On Map 177, on 12th Street between Greenwich Avenue and Seventh Avenue, there is a 12-inch Consolidated main, a 16-inch Mutual main and a 6-inch New Amsterdam main, the entire length of the block on both sides of the street. They are all on one side of the street, on the south side. In every case, I try to have these maps so that they look south. On 12th Street between Sixth Avenue and First Avenue we show a 12-inch Consolidated main, a 16-inch Mutual main and then still on the south side of the street a 6-inch New Amsterdam main, and between First Avenue and University Place we have a 12-inch Consolidated main [fol. 787] on the south side of the street and a 6-inch Consolidated main. In addition we have on that block a 24-inch Mutual main; on the same street a continuation of the 12-inch main of the Consolidated Company and a continuation of the 24-inch Mutual main. We have not, however, any continuation of the 6 inch Consolidated main. There is no 6-inch main of the New Amsterdam Company in that block. There is a main of 4-inch diameter of the New Amsterdam in that block and that does not connect to another 24 inch main. Within the limits of the street it does not connect across to a 4-inch main. There is a 6-inch main between First Avenue and University Place, and it subsequently becomes a 4-inch main at University Place. It may connect to anything in the intersection here, but beyond the intersection there is a 4-inch New Amsterdam

main which has approximately the same relative position as the 6-inch had on this other block. I made an appraisal in the New York and Queens Gas Company case tried before the present Special Master. I have not the New York and Queens appraisal figures before me now as to whether labor cost to lay a 6-inch main in that territory was 1.149 per foot.

When we got our prices on cast iron pipe, we have a price per ton for each size of pipe; 3 inch and under, 4 inch is another price, 6 inch is another price and 8 inch and above is another price. The prices that I used were not based on Class B waterpipe. The question of differentials did not enter into it at all, and also whether or not they were based on Class B pipe. I did not receive any quotations [fol. 788] for cast iron pipe for delivery from abroad. Such quotations have not been made to me in the past year, nor have I sought them. I do not know whether or not quotations have been made in the past year to anybody from abroad. There were no American Gas Association standards of pipe fifteen years ago; it goes back about 1912 or 1913. I do not know that there were any standards in effect before those standards went into effect. I am not aware of the fact that in the past fifteen years, the method of casting the pipe has radically changed. The manufacture of gas pipe that we get now has been standard for some time. There has been a modification in type which is really in the experimental stage, in casting what is called a centrifugal pipe. That is still in its experimental stage. It costs just the same, but it is a little harder to cut, and while we have bought some of it, it is really still in its experimental stage. I knew that pipe has been manufactured, sold and used which was cast in lengths to lay longer than 12 feet from joint to joint. If cast iron pipes were put in to lay longer than 12 feet from joint to joint, it would be more expensive. I know even now, with our 12 foot lengths we have to cut those so much per length that there are very few places where you could use a 16-foot length pipe. In the territory of the plaintiff, there is not any cast iron pipe with universal joints. There is other joining material than bolts where universal pipe is laid and where you have a polished or turned and bored joint, but

that polish is the essence of that joint, and you could not hold that polish. A grain of sand in there ruins that whole [fol. 789] joint. The polish is a joining material; it is supposed to be on the surfaces that come together, but it cannot be kept there. It is used in laying universal pipes. We made experiments with the comparative cost of laying bell and spigot pipe and universal joint pipe some years ago, and found out we could not make the joint tight, and beyond that we were not interested in the question. In my experiences, gas pipes have always been made in 12 foot lengths except that the foundries advertise they will make 16 foot lengths, and they do now. I am not as old as that to know whether the pipe was laid in nine foot lengths and less. I do know, from hearsay only, that there was a time when pipe was made and laid in 9 foot length or less. I have not taken out any nine foot pipe from the ground, except it has been cut pipe. I do not of my own knowledge know whether or not any considerable quantity of mains or pipes were laid in nine-foot lengths or less. I know that the standard laying length has been increased from 9 feet to 12 feet, only from hearsay. I do not know what the cause was of increasing the length of the pipe from 9 feet to 12 feet. Undoubtedly, at that time the object of increasing it from 9 feet to 12 feet was to do away with the number of joints. The leakage there in the mains is very slight. You get an infinitely greater amount of gas if you have a broken main and somebody fires off a blast and breaks your main. It would take years of joint leakage to make up what you would get in a very few minutes there. The joints between the service pipe and the main is a nipple screwed into the main and I have very rarely seen [fol. 790] leakage there; that is an infrequent occurrence. The amount of leakage that occurs at the joints of the pipes is very small in the territory which I control—The Consolidated Gas Company is what you are referring to. I do not mean that the joints of the gas pipes on the gas mains of the Consolidated Gas Company are caulked in such a manner that the amount of leakage at that point is practically negligible, because no leakage is negligible, but it is very slight; they are kept in good shape.

In the process of making up and preparing this exhibit, I figured out the labor cost in the way I have already described.

In preparing my appraisal of mains, Plaintiff's Exhibit No. 268, I do not think any time study I have used as a basis for my estimates is in any book anywhere, except my working papers. My estimates were based upon time studies that I made, among other elements. We are always doing that. We have time studies on laying mains in piecemeal fashion and we have time studies where we have not laid mains in piecemeal fashion. My time studies did take into account the fact that in actual practice I have been laying mains in piecemeal fashion, but there is no piecemeal fashion construction contemplated in my appraisal. My prices were, in a measure, in a way predicated upon the study of the time records for laying mains in the territory of the plaintiff in the year 1922. I do not know that the largest cast iron mains laid by us for the plaintiff in 1922 were 8 inches in diameter. Referring to the book, I have some 10 inch in the first month of that year, and I have some 16 inch in the second month,—pardon me when I said the second month; that was in April, the fourth month. [fol. 791] There was some 6 inch mains laid in 1922, not all on one job, but on several jobs. I cannot give the longest length in one piece from this book and not from my head. I have a record of every main laid in 1922; I have the fact in this book that so many feet of certain sizes were laid. I have not anything here which would show the locations of laying all the 6-inch mains during 1922. The book will show whether in 1922 the amount of 6-inch main that was laid in plaintiff's territory was 5,644 feet. I have already testified that whatever the quantity of mains laid, of 6 inch diameter, during 1922, it was not in one job but in separate jobs. I laid some 6-inch main between January 1, 1923, and June 1, 1923, and that likewise was laid in separate jobs. The 9,122 feet of 4-inch main withdrawn or abandoned in 1922 was not withdrawn for the reason that it had depreciated to an unusable extent. Some of it may have been withdrawn because it was found that it was inadequate for the purpose for which it had been used.

I have seen the Mutual mains exposed, in my work in the city. I take care of and maintain them, and have maintained them, and know exactly what condition they were in, every foot of them, that is every foot taken over from the Mutual. I cannot give it to you in feet, but we are continuously making openings throughout the City, and in the section of the City containing Mutual mains we were then and are now continually exposing them, and the Mutual mains placed on these maps were placed there from records of such an exposure. If I knew why in 1922, 689 feet of 30-inch cast iron main was abandoned—the exact location,—I cannot recall the exact distance at this time,—but on 60th [fol. 792] Street at the Bridge, that is at Second Avenue and Third Avenue, we have a 30-inch distribution main and the New York Steam Company had a very large main underneath, and it had reduced that main to such a state by the heat from the steam working on the lead in the joints that we had been unable to use that main properly for several years. We took that main out and put a section of No. 16-inch welded pipe in. I do not know of any reason for the withdrawal of 1,810 main, in 1922. That was a main that had previously been disused, it was temporarily out of service, and we had hoped to put it back in service, but we finally found we would not be able to do that, and as of December, 1922, we wrote that off the books. My recollection is at the time that it would cost more to recover the pipe than the value of the pavement which would be disturbed. I do not recall offhand how long before it was written off had it been disused. I do not locate from this book the exact point at which it was. It may have been several pieces at different points in the city. There was some of the 6 inch diameter cast iron main abandoned and left in the ground in 1922. I will answer that without looking at the book; the figures I have is 89,287. For the same reason as the other. The mains had been disused and we were unable to us them finally. They were temporarily disused and we were unable to put them back in service, so we finally wrote them off the books as of December, 1922. They were disused, for a great many [fol. 793] different causes. Everything from the fact that a street has been physically closed, or we will say, closed

on paper, by the City, and the main still continues to serve something there, the shanties, and so forth, and finally you cut it off, disuse it. That is one case. Then it has to be abandoned eventually when the street is finally physically closed. There are other cases where a building is going up and it is necessary to temporarily disuse the main because it is close to the excavation of the building. Later, it may not be able to be put back at all, it may have to lay another main in place of it some place else. There are other cases on subways where the locations of the mains were changed. A great many of these came in on subway work. This quantity that I gave you was written off the company's books as of 12/31/22. Undoubtedly from time to time other mains had taken the place of those mains; except such mains as were in the streets which were closed at the court house site here and other streets around town which have been closed where there is no necessity for a main. There were streets that were closed in which some quantity of that 6-inch diameter pipe was abandoned and written off. There were a lot of streets around the Grand Central Terminal improvement and streets that now are streets as far as one can see from the surface but there is nothing but steel underneath, and you cannot have a main in there. There are streets over at the court house and streets around the bridges. In reference to those places where the streets were closed, I mean by that there are not now any consumers being served by the Consolidated or [fol. 794] by any other company. In 1922, 870 feet of 6-inch cast iron main were taken up. Such pipe as was good went back to the yard and such pipe as was broken in the process of taking it up went in scrap.

I assumed that the cutting of the paving, in making up my estimate, would be done by my men under my instructions, by pneumatic tools. Operating expenses, cost of cutting the paving done by my men, the cost of putting back temporary paving done by my men, and the cost of permanently restoring the pavement done by the contractors are all set forth on the schedules, that accompanied the appraisal, with the exception that, of course, the cost of cutting through the pavement where a pavement actually existed where the mains were laid, is a part of excavation and back fill. It is part of that item.

In my estimate, Plaintiff's Exhibit 268, I have given the cost of pavement as at least $602,678.37. The cost of cutting the pavement, is included in the item Excavation and Back fill, and that item is a separate item for each size of main and is given on the first detail sheet. The cost of restoring the pavement is a separate item. That cost depends upon each size of main for each block that it may have been in, when there was pavement disturbed and is different as each class of pavement was encountered in that block; and that makes up a great number of different instances and it all comes down to a certain quantity of payment of various kinds. To get my figure $602,678.37, I took in some cases actual pavement that had been replaced over the mains when they were laid as shown by our books and in other cases where I knew the date the main was laid and where I could then find from City records the type of pavement which existed on the date [fol. 795] that that main was laid, I reproduced the type of pavement at the market price as of June 1, 1923. I took the actual quantities and applied to the actual quantities the cost as of June 1 1923. This sum applies to the reproduction cost of pavement only as to some of the diameters of mains. There were pavements of different kinds intended to be covered by this estimate of six hundred two thousand and some odd dollars; such as asphalt on a concrete base and stone base; granite block on a concrete base and sand base; wood block that is all on a concrete base. You have some pavement of concrete alone, and macadam. The figure for the asphalt on a concrete base and stone base as of June 1, 1923 is $3.95 per square yard; on a stone base $2.95 per square yard. Those are the prices we are paying right now. We were paying those prices on June 1, 1923, to contractors in the city. We were paying more than that in some cases. The contracting company is called the Gaffney Contracting Company. Those prices as of June 1, 1923 compared with January 1, 1923 were exactly the same. I don't believe there was any change as of January 1, 1922. Since June 1, 1923, the prices charged by contractors have gone up 25 per cent this year. The City of New York on or about June 1, 1923, may have done some kind of payment. I have no present recollection exactly whether or not they

did right at that date. They have a municipal paving plant in the Borough and do *do* pavement work. They may have done some for us, not a great amount during 1923. I don't recall the exact price the City did it in 1923 when it was done. On June 1, 1923, concrete base granite block was $3.25 per square yard; on a sand base it was $1.20 per square yard. The $3.25 is not from the [fol. 796] same contractor. That is from Fitzgerald, the contractor that does that type of paving. $1.20 is our own experience. We do that ourselves. Those prices are the same as January 1, 1923. I cannot remember as far back as January 1922; I don't think there was any material dif-erence. The Consolidated Gas Company do only the granite block on sand paving and the other has been let out to contractors who have the equipment to do the paving. Those contracts are negotiated through me, and the prices fixed by the contractor. We deal with more than one contractor. Fitzgerald and Gaffney are two. They are not doing the same kind of work. They happened to be the successful bidders last year on two types of paving. Gaffney did asphalt paving. The contracts for paving were awarded to Gaffney and Fitzgerald as the result of competitive bidding. They were invited by letter. Invitations were extended to submit bids, to the Brewster Company, the Asphalt Construction Company, Uvalde. There may have been several others. There are quite a number of companies in the asphalt paving business and it is my recollection that in each case that the City of New York was invited to do it. The City of New York have not submitted any bids for that kind of work lately. There have been times when they have agreed to do a certain amount of pavement to help keep their equipment busy but they are not in such position now. The price as of June 1, 1923 on wood block on a concrete base was $5.25. That work is done by Fitzgerald. That is the price we were paying Fitzgerald on June 1, 1923. He was doing work on or about June 1923. The price of $5.25 compared [fol. 797] with January 1, 1923 is exactly the same. There may have been a few cents variation there, as of January 1, 1923, I don't know the exact figure, but very little difference. Subsequent to June 1, 1923, 25% increase was on practically all pavement work. In these various in-

stances in which the work is being done, or has been done by one or more contractors, everything is furnished by the contractors. For the concrete alone the price bid as of June 1, 1923 was $2.75. That price was from one of these contractors, I am not able to state just which one. That price compares with January 1, 1923 exactly as I have indicated for the others. The same holds true as of January 1, 1922, and also subsequent to June 1, 1923. There has been a general 25% increase since January 1, 1924.

A concrete pavement may be two things; there are some places in the city that are paved in the same way that you have seen some state roads with the surface pavement of concrete. And then there are some cases where we have laid mains in advance of the city's paving the streets where the city is merely repaving the surface and have given us a permit provided we restored the concrete that we broke out in the trench. Therefore, we pay for that, the cost of the concrete base of the pavement, and the city restores the surface. Both of those are included in this pavement here. The City has done practically no paving for us lately, that is, in the past 18 months or thereabouts they have done some paving where there has been a dispute as to who was responsible for the cut. The city may have paved it up and sent a bill to us for it. There might have been an odd place here and there.

[fol. 798] In my appraisal Plaintiff's Exhibit 268, I have taken exactly the kind of pavement that was there and assumed the restoration of the same kind of pavement, that is to say, I did not assume that the kind of pavement would be disturbed and a pavement of another character put back. The price of the macadam, as of June 1, 1923 is about the same as of January 1, 1922, $2.50. The same situation there in all paving work. I don't think we have had any macadam done in some time, except we had some done up on that 20 inch main that I spoke of. Macadam is a very difficult type of pavement to have restored. It is not so hard to do the work but it is hard to get anybody that is willing to do the work because very little macadam pavement is now used. There is macadam pavement or there was as of June 1, 1923, on some stretches of Dyckman Street and the Speedway. There is bituminous macadam pavement in the parks.

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In making up my appraisal Plaintiff's Exhibit 268 and speaking of that part of it which relates to my reproduction cost of pavement as of June 1, 1923, I assumed that this pavement was disturbed and restored as of June 1, 1923, I took the pavement which existed at the time the main was laid and made up my estimates on that. At the time the main was actually —. That is the only kind of pavement I have taken anywheres at any time and that kind of pavement is reproduced at prices as of June 1, 1923. I got the quantities of pavement that are embraced and included in my figure of six hundred and two and some odd thousand [fol. 799] dollars from those same two sources, the books showed the actual amount of paving and showed the yardage and the price. Where we merely knew the type of paving we took the trench diemension times the length of the main and converted it into square yards, times the unit cost per square yard for the type of pavement that was there when the main was laid reproduced as of June 1, 1923. In the Bronx, the Consolidated have no mains less than 6 inches in diamter. It is also true that we did not lay one single foot of main in the Bronx from Jaunary 1, 1922, to June 1, 1923, also that we did not lay a single foot of it of any size for the plaintiff in the Bronx from January 1, 1922 to December 31, 1923. I am certain as to whether in that two-year period we did not remove or abandon or take up a single foot of main in the Bronx. I will have to go back over my records for that period from January 1, 1922 to June 1, 1923. The accounting department has a ledger in which they keep such data as would show the locations and when the mains were laid in 1923. It is not one of my records. In April or May 1923, we laid 1,642 feet of 12 inch main at 116th Street, 117th Street and First Avenue. The total reproduction cost of laying the quantity of that main in April and May 1923, at the location I have given is not $4,272.01. I have that amount on per foot basis and I have the bare labor cost of $2.859 per foot, and then I have the various other items that are not included in the total bare labor cost, such as the difference between my labor in my appraisal and the labor as of that time and [fol. 800] the absence of rock on the job, and the use of the compressor, which is not in that figure. In laying that 12

inch main we have to cut through an asphalt pavement. It is on a block base, on Avenue A, it is on a concrete base on 116th Street and on First Avenue it is granite pavement on a concrete base. I haven't any figures here from which I am able to say what the cost of restoring that pavement was. At 116th Street in laying 1,642 feet, 2 inches of 12 inch main, the cost of the material was 3.075 per foot incomplete. By "incomplete" I mean that certain quantities of lumber which are taken out of stock in the yard, in the normal practice of laying mains, are not especially charged to the job, while in the appraisal figure I have to take all of them into consideration. The cost of the lumber that entered into the laying of that 12 inch main was 12.1 cents per foot. The 12 inch main is merely an extensions of the existing 12 inch New Amsterdam main.

On the 23rd of May 1923, I completed a job of laying 6 inch main at 190th Street and Broadway. In laying that 12 inch main at 116th Street and 117th Street and First Avenue, laid in April and May 1923, there was absolutely no rock encountered. The digging of soil was very good there through 116th Street; it was all sand. The sub-surface structures did not bother us except the northeast corner of First Avenue and 116th Street. There were others in the street, but they did not bother us in any way. There were water services and other things crossed under or over the mains, but they were only incidents of the work and did not amount to anything. In crossing First Avenue at that [fol. 801] point there were several water mains and catch basin connections from the sewer to the corner catch basin, a number of duct lines and other structures that required that we go rather deep at that point; but that was only for about thirty feet. Those subsurface structures did not change the character of the specials on the main, as compared with the character of the specials on a main where you would meet more difficult sub-surface conditions. The special per foot on this job only ran 5.29 pounds, as against an average condition of 6.78 pounds. In an average condition the percentage for specials would be nine percent. If you took all the pipe and all the specials that went into this system and you weighed the pipe separately and weighed the specials separately, the specials would weigh nine per cent of the total weight of the pipe.

[fol. 802] By the Master:

Of the total distance of the mains, if you added all of the distance that was rock that would be ten per cent of the total excavations.

By Mr. Donnelly:

In order to complete that, there would have to be added to the $2.859 per foot for labor, the element of the use of the compressor which has not been charged in the books of the company to that job. It was used for 231 hours at $1.30 an hour and is figured out to 18.3 cents per foot of main—and there is no overhead added on that job whatsoever. By overhead, I mean the actual field supervision, which is included in my estimates on Plaintiff's Exhibit No. 268, but is not included in this figure here. The field overhead for laying that main or doing that job would run about 30.5 cents per foot, and that would have to be added to the units already given in order to make the labor cost complete. 30.5 cents per foot is my experience of the actual amount of overhead we have to have. It is approximately [fol. 803] 5 per cent on the labor cost and 2 per cent on the tools, and that would make the overhead 30.5 cents per foot. The total labor cost for laying that quantity of 12 inch main would be $3.347. The conditions encounter- there would be described as easy, and not an average condition, by any means.

Referring to the 248 feet of six-inch main laid on the 23rd of May, 1915, at 190th Street and Benett Avenue and Broadway, Bennett Avenue is a fill on top of the old level of the island there, just a sand fill and there was no rock encountered in that job. This is earth piled right on top of the original soil, in a prism, and no subsurface structures. There was no pavement there. That I would call an easy condition. The labor cost on that job was $1.43. The material cost on that job was $1.34. We had 836 pounds of specials or a little over 10 per cent. It was a short job and the specials were used in connecting on to the other end of the main, putting a drip on and putting a T out for the Bennett Avenue main. The cost of the specials on that job was .212 per foot or about $52.97. The cost of 6 inch connections for connecting up a main to an existing fitting

might be $1,000. The cost would vary at different places, depending on what difficulties you have in making the connection, how much excavation you had to do, how much room you had to do the work and how far back you had to tap the holes. In this reproduction estimate I did not make a single connection under gas except the tapping for the services. I cannot tell from anything I have here that in April, 1923 I replaced a 4 inch cast iron main with a 6 inch main at 81st Street and Amsterdam Avenue. The data I have been reading on fragmentary costs on jobs which I have supplemented by the elements which go to make up actual costs comes from my own office. The figures [fol. 804] were made up by me, on actual jobs.

I have nothing which will enable me to answer as to whether or not at Jay and West Street we replaced a main in April 1923. I merely brought with me the mains 200 feet long as being real main jobs. I have no data of any locations on Manhattan Island at which mains were replaced, none of those are replacements; they are new installations.

The 20 inch main at 20th Street and Ninth Avenue was a low pressure main.

I have no recollection of an 8 inch main being put in on the east side of West Street in the vicinity of Clarkson Street.

In making up my appraisal, Plaintiff's Exhibit 268, I have not included in that appraisal any mains which have been paid for by the consumers or by some real estate development company.

I do not know a street in Manhattan called Salarium Street. I have not a street record book which shows the length of the main that is laid on each job, outside of the accounting department subsidiary ledger. I know of no other book. By subsidiary ledger I mean merely that that is what they call it. I am not an accountant and my characterization of it may be entirely incorrect, but it is a book that looks like a ledger and they call it a ledger. My department does not keep a book in which is put the location and the diameter of the main and the number of feet of main and the date when the main is laid. We make a report when each main is laid, which gives the date of the laying, the

location of the laying, the diameter and the number of feet of main laid. The labor ticket which is made by men in my department carried all that information. I have nothing here from which I can say whether or not on the 11th of April and the 23rd of April, 1923 I laid a 24 inch for the new Amsterdam, we put in a lot of 24 inch pipe in [fol. 805] the course of the year. Possibly we put a 24 inch pipe in for the New Amsterdam in 1923 as a repair job. When we replace a 4 inch with a 6 inch main, our records show the labor cost for removing the old main as well as putting in the new main. It is all part of the job if the main is removed but it is not always removed. I know nothing about the accounting end as to where that labor cost is charged.

If I were reproducing the system, according to my definition of reproduction, I would put back exactly what is there, which is 20 per cent of lead wool joints and 80 per cent cast lead joints. There are absolutely no cement joints in our system anywhere. The presence of lead wool joints is due to two things. It is due to original installation with lead wool and it is due to repair work being done with lead wool. A whole lot of that was done on the subway where the joints had to be cut out anyway. We repair a very large percentage of joints which might be leaking by caulking the joint up with lead wool. I get the percentages from knowing how many lead wool joints I put in and I know the total number of joints there are. I get my information from records in the office. If I were laying a main today, I would not have a mixture of cast lead joints and lead wool joints on the same length of pipe in a certain block; I would put it in with lead wool. My practice in Manhattan does not differ from my practice in the Bronx, as to the use of lead wool in repairing joints. The Bronx Gas Company uses some cast lead joints still throughout the territory. The 30 miles of 30, 36 and 48 inch transfer and distribution mains on Manhattan, Bronx and Queens, the laying of which I had charged in 1910, [fol. 806] were not finally completed until several years after that. We had a terrific amount of difficulty in getting permits to lay the 48 inch main in Astoria, and I believe it was two or three years before we got that. There were no physical conditions that delayed the completion of the

work in laying these 30, 36 and 40 inch mains any more than any other job but it was really a terribly hard job, and it was the difficulty we had in getting the permits. Approximately 10 miles of that 30 miles of main was laid in Manhattan, and about a half a mile of the 30 miles was laid in Queens. That took part of a year but I do not remember the exact dates now. The main was laid on a trestle, and it was quite a hard job. The difference between the amount for Manhattan, added to that of Queens, subtracted from 30 miles gives the amount for the Bronx. Two 36 inch and one 24 inch mains were laid under the Harlem River. The Harlem River is 400 feet wide, and it is roughly 800 feet of 36 inch and 400 feet of 24 inch. In making up my appraisal, I have the actual cost of the mains and the elements of cost, because I laid the two 36 inch mains and on the 24 inch and I had all the figures and the original bills and all the data and just reproduced that on the basis of market value of the labor and material as of June 1, 1923, and I applied the costs that prevailed as of June 1, 1923, in making it up. May I make it a little clearer and say that the footage of those mains as given here, the 36 inch, Harlem River main is 1102 feet, and the 24 inch is 834 feet. I have not as yet prepared a statement showing the cost of the transfer mains, on the basis that I have indicated as to costs.

In the figure on Plaintiff's Exhibit No. 268 of $760,045.68, [fol. 807] opposite the item "4.185 per cent on $18,400,-135.75 for employees and public liability insurance on labor," no employees are figured as employees at all. That insurance is always figured on the payroll, and I have taken the total labor figures here at that percentage, 4.185 per cent, which is the rate of the insurance that insures the employee, and it is figured *it* on the payroll, and I added my labor up, taking the total labor per foot times the total mileage per foot, and I obtained a total labor figure and that gives me the figure of $760,045.68. I inquired from insurance agents Harry Dedell on Maiden Lane and from Hamlin & Company dealing in this kind of insurance as to the tariffs that were in effect as of June 1, 1923. I do not know if the Consolidated Gas Company had any kind of insurance in effect of that kind on June 1, 1923, but I do know that this figure is what we were charging out on our bills on

that date, when we billed outside. The percentage has not varied any since January 1, 1923, or as of January 1, 1922. I am pretty sure that this figure has held for quite sometime. There are two kinds of insurance in there, employees and public liability. They did not ask the total money amount of the payroll; they know the Consolidated and they know the class of work. I asked those insurance agents what the lowest tarifi rate for street work in laying gas mains would be as of June 1, 1923, and they gave me that figure and they gave it without asking how many we had or anything like that, and also stated that that rate checked with the rate we were using as of that date. I gave the lowest possible figure in the appraisal. Hamlin & Co. take some of our insurance of this kind.

[fol. 808] In answer to the Master's question, I testified that rock was not considered by me in the service laying, as most of the rock would be excavated when the mains were laid. My statement implied that, if you are laying through rock, if at the time you found that there was high rock where one of your services would lay, it would be taken out at that time while you had the powder and the tools and the other things there, and you were to blast out that rock. You would have to fill in that hole to make it safe for traffic, and later you would come along and lay your services, and not have to take out that rock, because it had already been taken out, and you would not have to bring your plant there again. There is not much rock on services, because the services run higher than the mains, and a great deal of the rock is taken out when the building itself is built. Assuming you are laying in a rock trench, [fol. 809] you have excavated that rock, and have back filled that trench with earth, when you excavate them over the point on the main where you are going to later put our services, you have only to excavate through earth, and not through rock. In making up both of the appraisals, that is the appraisal which relates to mains and to services, I did not figure that the excavation for the two would be at the same time. The excavation for the service is a separate and distinct proposition from the mains, except in so far as there is rock work done in the original main trench, which we do not have to take up twice, when we put our services in. As to how long after the mains are laid the

gas is purged from the main, it depends entirely on the way you are laying the system. My experience has been anythink from two or three hours to a year. There are occasions where a year has elapsed before the service is connected to a main and it might be more than that. You cannot connect your services until you put the gas in the main and you might not be able to put gas into the main [fol. 810] for a long time. There have been instances where the Consolidated Gas Company had to wait a year before putting the services on the main and giving gas to the consumer. I can recollect the 48 inch main that was laid in the Borough of the Bronx in 1912. That was a transfer main, but it would be just as true of a distribution main. It took nearly a year to complete that main to a point where we could purge it. You cannot put services on the mains until they are purged. I do not know of a time in my experience that the Consolidated Gas Company laid any distribution main where at least a year had elapsed between the time the main was completed as far as its laying was concerned, and the time the consumers got gas through the main; it may have been, nevertheless.

There is not any duplicate excavation here. Where service pavement was concerned, I only put that pavement in there once, and I figured that the service is to be laid before the pavement is laid over the main. When a main is laid in the street, it is back filled and temporarily paved, but I am talking about the permanent pavement. When it is paved, whether temporarily or permanently, it is a fact that when we get ready to connect up our services, we have to dig a hole in the street before we can make the connection between the service and the main. After the main laying is completed, the pavement is not put back until the service is put in. Before the service is put in, the trench is filled up and temporarily paved to make it safe. We then go back and put our service in.

[fol. 811] New York, March 26, 1924.

Met pursuant to adjournment.

COLIN C. SIMPSON, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination (continued) by Mr. Donnelly:

The Consolidated Gas Company has no services in the Bronx.

I know of no decrease in the price of specials since March 1, 1924. The prices of specials vary to practically the same extent as the prices of pipe. The same unit prices for the labor and material in laying mains in the New York & Queens case as in the instant case are applicable in so far as the different materials themselves are concerned—that is, the pipe, the specials, the lead, the yarn, the lumber and the unit costs for labor are the same, but, as the two territories are entirely different, the quantities of those per foot of main of course are different, which results in a variation of unit costs in Manhattan as compared to Queens.

The storeroom charge of five per cent includes the cost [fol. 812] of handling the small materials in the yards, keeping field records of the materials and tools used, the cost of such land as may be used for storage, loss of material and tools and incidental materials not covered under any of the specials items, such as the use of derricks, pumps, barricades, rope, red flags, oil, fire clay, coke, firewood, wooden plugs, canvas, lanterns, soap, nails, water, cement, sand, broken stone, stoppers, bags, and all other incidental material that you use in doing work of this kind, but which is of so varied a character that each item is too small to classify by itself. I arrived at the five per cent figure to cover the storeroom charge, by experience. In 1918, as an illustration, we had a figure on that work of nine per cent. I have taken a much more conservative figure as this is a large job. We do not include in that figure the carting or care of pipes and specials to the store yard. You could not leave your lead in bulk on the job, lead wool is too valuable and too easily stolen, and things of that character have to come from some central storage point. You could not store [fol. 813] any great quantity of dynamite, or things of that sort out on the job; you have to keep track of all this mate-

rial and men have to do it, and our experience is that five per cent is a conservative figure for that. All the main laying that we did in 1918, probably ten miles or less, was used as illustration of my experience. There was main laying in years subsequent to 1918 over which I had direct control and I have the data relative to the cost of doing those jobs.

On May 1, 1923, the price of lead wool was 9.4 cents per pound and cast lead was $.0775 per pound. I have not the price of yellow pine as of January 1, 1923, it is in the company's possession. I have not with me the price of yarn as of January 1, 1922. Some of our men do caulking, among other things, for which we pay them from $4.80 to and including $5.60 per day; they do laboring work, besides. The turnover in my department is very frequent, from 15 to 20 per cent, a year, anyway. Of course we have a lot of old steady employees that have been with us a long time, but we have to take on men all the time to keep the average age down. That comparatively frequent turnover is in all classes of labor, except the higher grade of foremen, of course. Any employee that comes with us we hope to make a steady employee, if he is worth it. The steady employment applies to men that do main laying and dig the trenches. One day our men may be doing the highest grade of skilled work and the next day may be doing ordinary laboring work of breaking up pavement.

I laid mains on June 1, 1923 for the Consolidated Gas [fol. 814] Company, in the Borough of Manhattan. We laid 6, 12, 16 and 20-inch mains, or a total of 620 feet, in June 1923. As a general proposition, those were scattered jobs. The Consolidated Gas Company has information as to the cost of laying the mains in June 1923, covered excavation and back-fill, and yarning and caulking of the joints, on the work ticket. The report on the work ticket states the actual conditions that were encountered and the cost of meeting those conditions. The accounting department puts the prices of the materials on the work tickets and a draftman in the field gives the information as to the labor cost. The hired cartage is sometimes the subject of a written contract and sometimes oral, but always negotiated by me.

I made no assumption as to purchasing the 5,219,487.81 feet of pipe mentioned in Plaintiff's Exhibit 267. I ob-

tained the prices from different foundries and took the lowest price quoted. As the prices for the inspection at the foundries are based on weight, and the percentage of specials is less in The Bronx than it is in Manhattan. You have less cost of inspection in The Bronx. The variation does not occur on single pieces of pipe but on the weight of pipe in total and when you lay a hundred feet of pipe, you have to buy that 100 feet of pipe and your specials in addition.

I don't know the exact date when we last installed services of one-inch diameter but they put them in lunch wagons, soda water stands and elevated stations now. It is not our practice to install a one-inch service in a consumer's house if we have room to get a larger one in. One-inch services have been put in right along, but the bulk of the services put in now are sizes greater than one inch. The average size now installed might be around two inches, but they run up [fol. 815] to eight inches. I have no recollection of when I last installed services of three-quarter inch diameter.

There is no difference in the rate of wages paid to the men who do the *the* service laying as compared with the men who do the main laying.

We got the current market price for the materials for the services by investigation from our actual purchases of the materials and from quotations in the trade publications—The Iron Age, the Metal Trades Journal, the Engineering News Record, Gas Age Record. Not in all cases did I find we were buying cheaper than the prices quoted in these trade publications, because these prices sometimes have a considerable lag, and they really showed the trend more than they showed specific figures. In some cases I found we had been buying cheaper than the prices quoted [fol. 816] in the trade publications and principally the wrought iron and cast iron pipe, but of course cast iron is not used in services. My present recollection is we were both above and below the figure that they gave to show the trend, of course their figure is an average figure. The trade journals give the trend and not the market price.

The yarn is used in putting the split sleeve on a main to make the service connection. It is quite likely that we did buy 2-inch pipe around June 1, 1923, as we are installing two-inch services all the time. I have given you a lot of

figures on the range of price of wrought iron pipe used for services from January 1, 1922 to June 1, 1923, but I don't believe I have given you those for January 1, 1922. We are buying inch and a quarter, and inch and a half pipe right along for installation in consumers' dwellings, but inch and a half services can be put in for slightly less money than inch and a quarter, and, therefore, we prefer to buy inch and a half.

[fol. 817] WALTER R. ADDICKS, called as a witness on behalf of the plaintiff, being duly sworn, testified as follows:

Direct examination by Mr. Ransom:

I am Vice-President of the Consolidated Gas Company, and have been connected with the Company since 1903. Early in that period I acted as Secretary of the Executive Committee. I later became acting president of the company for a number of years, and thereby my duties were numerous and hard to define. I passed on the original building of the Astoria plant, and presented to the Executive Committee all matters emanating from the chief engineer's office, or the engineer of construction. In my connection as Vice-President of the Consolidated Gas Company, I act as Secretary of the Executive Committee; I am also a trustee of the Consolidated Gas Company, likewise a director of a number of affiliated companies of the Consolidated Gas Company.

I act as technical advisor to the Executive Committee of the Consolidated Gas Company, in bringing before the Executive Committee all matters involving construction and propositions as to extensions of works, etc.—both before the President and Executive Committee. I am an engineer. I was educated principally at the Episcopal Academy at Philadelphia, and thereafter went to the Naval Academy, where I entered the class of '82, engineer corps, United States Navy, entering in '78 and graduating in '82, a four-year course. After resigning from the service, I spent about four years with the Pennsylvania Railroad in Altoona, two years of which I was detailed upon special duty away from Altoona, surveying the shops and shop yards of the Pennsylvania System east of Pittsburgh and Erie,

covering the territory from Jersey City and Alexandria, Virginia, to Pittsburgh and Lake Erie. I left the Pennsylvania Railroad and became engineer for the Beacon Construction Co., which was contructing a gas plant in Boston. I made all the designs and erected the machinery for that gas plant. It did not include, however, at that time the construction of holders, which were already finished, and some of the buildings themselves.

During a certain period, the first year I was connected with that company, on account of the cold weather stopping all construction, I spent three months in Chicago at the Consumer's Gas plant, where I was engaged in the manu- [fol. 818] facture of gas in all its details, working personally in the plant, on the regular 12-hour shifts, including running the generators and putting the coal into the generators, making gas, etc. through all the ramifications in the manufacture of gas throughout the plant, the purification, etc. At the end of that three months' period I returned to Boston and completed the construction of the Bay State Gas Company's plant, which was being constructed by the Beacon Construction Company and when the plant was started I was made engineer for that company. Thereafter I became superintendent of distribution or rather engineer of distribution, of the Boston Gas Light Co. and became engineer of the South Boston Gas Company, the Dorchester Gas Company and the Roxbury Gas Company, and at a later date superintendent of the North End plant of the Boston Gas Company, which was their largest plant and the largest plant in New England at that time; and later became Chief Engineer of all of the companies that I have enumerated.

Both water and coal gas were being manufactured in Boston at the time that I was there. The Boston North End station was practically all coal gas at that time and another plant known as the Commercial Point station, which was about half the size of the North End Station, was also all coal gas. At a later time I became consulting engineer for the New England Gas and Coke Company, which was the first by-product coke oven plant used in this [fol. 819] country in connection with the local distribution of gas. I was also consulting engineer for the Massachusetts Pipe Line Gas Company, which was a distributing

corporation for the coke company's gas. I also became engineer of the Brookline Gas Company, which had both gas and electricity, at both plants, and at a later period I became Chief Engineer of all those companies, with the exception of the pipe line company and the coke company. Also during that period I was consulting engineer for a number of large gas companies, some in New York; and I erected a small gas plant for the Queens City Gas Company in Buffalo. Then in 1903 I was invited to come to New York as Vice President of the Consolidated Gas Company, and I have been with the Consolidated ever since.

With the Beacon Construction Company I not only employed and discharged labor, but I also paid the labor as well; and I bought material for the fitting up of the plant, and at a later period within my duties in connection with all these other gas companies I purchased coal and purchased pipe, and I advised with respect to the purchase of their oil. I have done practically everything in connection with a gas company, unless I might eliminate possibly acting as Treasurer or Chief Accountant. But, otherwise, I think I have covered every feature of the gas business.

[fol. 820] My first duty upon coming to New York was to pass upon the Astoria plans, as to the character of apparatus; and I personally handled at that time a number of contracts. At the present time however, the engineer of construction handles those contracts, brings them to me and I take them to the Executive Committee, making such comments or giving such advice as seems best. Thereafter the contracts are given out many times under my personal jurisdiction.

My duties in connection with the purchase of oil and coal by the Consolidated Gas Company and its affiliated gas companies have been as follows: in respect to oil I have negotiated all of the contracts for oil since I have been connected with the Consolidated with the exception of the first contract, I think it was in 1903, which was negotiated by Mr. Gawtry, deceased. As respects the coal during the time in which I was acting president Mr. Gawtry reported to me with respect to coal and he continued to purchase the coal from the time Mr. Cortelyou was made President until he left the company in the spring of 1920, and the President designated me to purchase the coal thereafter.

Prior to that time I kept in contact with the matter of the coal purchased through my position as Secretary of the Executive Committee, and in addition I have had experience in purchasing coal, as I think I stated in my qualifications, in Boston.

[fol. 821] The oil contracts of the plaintiff are for a stated time and for a stated quantity, the quantity ordinarily to be used within the stated time, that stated time having varied from three years to a minimum of six months. I will have to qualify that. In so far as the exercise of an option which was contained in the original contract might not have been over a period as long as six months but it was contained in a contract which extended over a period of a year ordinarily. It was formerly my practice to make contracts for more than a year, but that has been changed since the oil companies were disinclined to make any contracts for longer than a year. That has been a condition which has existed since the entering of the United States into the war. All of the oil of the Consolidated Company is bought under contract, and that has been the practice over the entire period, with one exception, within the last four months. My negotiations for the purchase of gas oil for the Consolidated Gas Company have embraced also the oil requirements of the gas companies within the City of New York affiliated with Consoldiated other than the Mutual. My practice with regard to the submission of the results of negotiations for oil contracts has been that the matter of oil contracts is always discussed with the President of the Company, and no contract is entered into unless it be [fol. 822] reported to the Executive Committee and authority given to make a contract. I report the results of the negotiations to the Executive Committee. The Executive Commiittee authorizes specifically frequently under my recommendation.

The practice is essentially the same in the case of orders or contracts made for coal, but I have authority to purchase trial orders of coal for experimental purposes. I sometimes buy cargoes of coal for steam purposes on what might be called a spot cargo basis, but all those purchases are reported to the Executive Committee. Also at times I order barges of particular coal for trial. Spot purchases

are usually limited to 500 to 1,000 tons. That may vary,—if it comes by barge from Hampton Roads particularly, it would be a suitable barge for ocean-going travel, and another feature is that we prefer to have about 1,600 to 2,000 tons as the amount of coal that would give a fair trial which would last in the plant in which we try it about a week, even if it comes from Pennsylvania by car I frequently make it 1,500 in order to get a week's trial.

I do not make any contract for the purchase of coal without a submission of the matter to the Executive Committee and its action. I have included in the purchase of generator coal or generator coke during 1922, 1923 and 1924 for the Consolidated Gas Company the requirements of the other affiliated gas companies of the Consolidated System within the City of New York. Possibly in 1922 all of the smaller companies may have purchased some coal prior to my taking their purchase over, but I think that during 1922 and 1923 [fol. 823] my coal purchases included those of the affiliated gas companies within the City of New York. Prior to that time there had been during the war period, some purchases by the individual companies. I think Bronx Gas & Electric Company may have continued to purchase their coal even after the time the Consolidated owned them. I cannot remember now whether that was under an existing contract. I don't think I purchased the coal of the Mutual Company from the beginning, although I did purchase in later years also for the Mutual.

In 1921, I personally negotiated a contract with the Standard Oil of New Jersey, for 114,000,000 gallons of gas oil for a period ending March 21, 1922, at six cents. I have the original contract here, which I signed for the Consolidated Gas Company, Mr. Brundage signed as secretary, and Mr. S. B. Hunt on behalf of the Standard Oil Company of New Jersey.

(Contract received in evidence and marked Plaintiff's Exhibit No. 272.)

Prior to making this contract the witness conducted negotiations for the supply of gas oil by letters requesting bids, addressed to the Atlantic Refining Company, the Gulf Refining Company, the Sinclair Oil and Refining Corporation, the Standard Oil Company of New Jersey, the Stand-

ard Oil Company of New York, Sun Company, the Texas Company, and the Tidewater Oil Company.

(The letters of request and replies received were identified by the witness and were received in evidence and marked Plaintiff's Exhibits Nos. 273 to 289, inclusive.)

[fol. 824] On January 21, 1922, there was a reduction in the price of delivery of oil under plaintiff's Exhibit No. 272, the constract of May 12, 1921, due to the removal of war tax on transportation.

(Letters modifying price by removal of war tax on transportation marked Plaintiff's Exhibits Nos. 290 and 291.)

On March 23, 1922, I negotiated a contract with The Standard Oil Company of New Jersey, for the delivery of 104,596,356 gallons of oil over a period from April 1, 1922 to December 1, 1922, at 5.4278 per gallon, with the transportation rate added to it, which makes it 5.5328 cents delivered at Astoria; and 5.5078 cents delivered at East 21st Street. This contract bears my signature and that of Mr. Hunt.

(Contract received in evidence marked Plaintiff's Exhibit No. 292.) [Before the execution of this contract the witness sent letters asking for bids to the Atlantic Refining Company, the Gulf Refining Company, the Pure Oil Company, the Sinclair Refining Company, Standard Oil Company of New Jersey, Standard Oil Company of New York, The Sun Company, the Texas Company, and the Tidewater Oil Company.] (The request for quotations and the replies received were identified by the witness, and received in evidence and marked Plaintiff's Exhibits Nos. 293 to 309, inclusive.)

[fol. 825] I sent a letter to the Public Service Commission, enclosing a list of the companies and a copy of the invitation requesting bids, and Chairman Prendergast replied to that letter under date of February 27th. I likewise sent the Commission a copy of the Letter extending the time for the submission of bids. When I saw Chairman Prendergast at the Commission's office, on March 22nd, our conversation related to the bids we had received as well as the current contract which was entered into the following day.

On March 23rd, I sent a letter to Chairman Prendergast enclosing the contract. On March 25th, I received an acknowledgment of the receipt of the letter and these enclosures from the Commission by John J. Hubbard, Assistant Secretary.

(Correspondence with the Public Service Commission marked Plaintiff's Exhibit Nos. 309 to 314, inclusive.)

For the period from January to May, 1923, I negotiated a contract with the Standard Oil Company of New Jersey, on October 20, 1922, for 60,000,000 gallons of oil at 5.4278, which contract was signed by F. H. Bedford, Vice-President and myself. (Contract marked Plaintiff's Exhibit No. 315.)

On March 7, 1923, we negotiated a contract for the oil supply for the period from July 1, 1923, to March 31, 1924 with the Standard Oil Company of New Jersey, for 100,000,000 gallons at 5.4278. (Contract marked Plaintiff's Exhibit No. 316.)

[fol. 826] March 27, 1924.

Met pursuant to adjournment.

WALTER R. ADDICK, a witness in behalf of the plaintiff, resumed the stand:

Direct examination (continued) by Mr. Ransom:

Before making the contract, Plaintiff's Exhibit No. 316, I sent a letter asking bids to the Gulf Refining Company, the Texas Oil Company, the Sinclair Refining Company, the Union Petroleum Company, the Standard Oil Company of New York, the Standard Oil Company of New Jersey, the Pure Oil Company, and the Tidewater Oil Company.

(Letter requesting bids and letters in reply marked Plaintiff's Exhibits Nos. 317 to 328, inclusive.)

On December 1, 1923, I sent a request to bid upon gas oil for the supply after April 1, 1924, to The Atlantic Refining Company, the Gulf Refining Company, the Pure Oil Company, the Standard Oil Company of New Jersey, the Standard Oil Company of New York, the Sun Company,

the Texas Company, the Tidewater Company, and the Union Petroleum Company. As the result of these invitations for bids, contracts were entered into for a supply of gas oil subsequent to April 1st, 1924. A contract was made on January 11, 1924, with the Atlantic Refining Company, for 20,000,000 gallons, 10 per cent more or less at the purchaser's option, to be taken within 12 month from April, 1924. The net base price was 4¼ cents per gallon delivered, for steamer delivery of not less than 725,000 gallons.

On January 15, 1924, I entered into a contract with the Standard Oil Company of New Jersey, for 42,000,000 gallons of gas oil, to be taken during the period from April 1, 1924 to September 30, 1924, with an option of taking 71,500,000 gallons more during the period from October 1, 1924 to March 31, 1925. The base price of the 42,000,000 gallons was 5 cents from April 1 to June 30, and 5¼ cents from July 1 to September 30. This makes the delivered price [fol. 827] 5.08 and 5.33 cents to 21st Street, and 5.105 and 5.355 cents, respectively, to Astoria.

(Contracts marked Plaintiff's Exhibits Nos. 329 and 330. Request and replies from the above stated companies marked Plaintiff's Exhibits Nos. 331 to 352, inclusive.)

I transmitted copies of the contracts, Plaintiff's Exhibits Nos. 329 and 330, to the Public Service Commission.

(Marked plaintiff's exhibit No. 353.)

I have prepared a schedule showing the number of oil tanks, rated capacity of each in gallons, and the working capacity of each in gallons, at each plant. I am familiar with the working capacity of the several tanks. The overfilling of the tank might cause a serious accident, especially where you are pumping very large quantities of oil and very rapidly, and there is a certain leeway that you have to follow in order to insure safe working capacity. There is a certain margin left to avoid accidents.

(The statement referred to is as follows):

Station	No. of tanks	Rated capacity, gallons	Working capacity, gallons
Consolidated:			
11th Street	2	750,000	700,000
21st Street	27	924,080	870,000
99th Street	14	193,200	181,000
Total Consolidated	43	1,867,280	1,751,000
Astoria	4	6,000,000	5,700,000
Total Cons. & Astoria	47	7,867,280	7,451,000
Standard 116th St	2	300,000	250,000
New Amst. Ravenswood	3	1,498 220	1,286,000
Central Union, 138th St	1	250,000	240,000
	6	2,048,220	1,776,000
Cons. and Astoria	47	7,867,280	7,451,000
Total	53	9,915,500	9,227,000

[fol. 828] I have also prepared, in connection with my work as to oil requirements a statement showing the rated manufacturing capacity of each plant per 24 hours, the oil requirements per 24 hours in gallons, and the number of days' oil supply represented by first the rated capacity oil storage of the tanks at such plant and the number of days' oil supply represented by the working capacity. (Marked Plaintiff's Exhibit 354 for Identification.)

Referring to the supply of anthracite coal, the "coal year" covers the twelve months from the 1st day of April.

During the coal year 1921-1922, we bought anthracite coal from the Madeira-Hill Company, the St. George Coal Company, Williams & Peter, the Lehigh & Wilkes-Barre Coal Company.

(Letters, quotations and contracts in regard to foregoing above marked Plaintiff's Exhibits Nos. 355 to 377 inclusive.)

During the coal year 1921-1922, we had a contract with the Seaboard By-Products Coke Company for coke.

(Orders and replies marked Plaintiff's Exhibits Nos. 378 to 385, inclusive.)

During the same coal year, we had contracts for gas coal with the Consolidation Coal Company, Berwind White Coal Mining Company, the Pittsburgh Coal Company, the Westmoreland Coal Company, the Pittsburgh Terminal Railroad & Coal Company, Alfred Musso, the Seaboard By-Products Coke Company, Stonega Coal & Coke Company, Maderia Hill & Company.

(Contracts and correspondence relating to purchases of gas coal for the coal year 1921-1922, marked Plaintiff's Exhibits Nos. 386 to 434, inclusive.)

The contracts and negotiations for the supply of anthracite generator coal for the coal year 1922-1923 were affected by the coal strike conditions. For that coal year we made contracts for anthracite broken coal with the St. George Coal Company, the Lehigh & Wilkes-Barre Coal Company, and Williams & Peters.

[fol. 829] (Contracts and negotiations in re same marked Plaintiff's Exhibits Nos. 435 to 443, inclusive.)

We also bought coke from the Seaboard By-Products Coke Company during the coal year 1922-1923.

(Orders and acknowledgements Marked Plaintiff's Exhibits Nos. 444 to 454, inclusive.)

During the same coal year, 1922-1923, we purchased gas coal from The Alden Coal Mining Company, Berwind-White Coal Mining Company; Consolidation Coal Company; George D. Harris & Company; Interstate Coal & Dock Company, Jewett Bigelow & Brooks, Inc.; Lake & Export Coal Corporation; W. A. Marshall & Co.; New England Coal & Coke Company; B. Nicoll & Company; Pittsburgh Coal Company; Pilling & Company, Inc.; Pittsburgh Terminal Railroad & Coal Company; Poland Coal Company; Moreland Coal Company; Seiler Coal Company; Stonega Coal & Coke Company; Wentz Company, Wentz Company acting

as our agent for English coal; Whiteley & Fodeisch; and Westmoreland Coal Company.

(Orders, acceptances, and letters in regard to same marked Plaintiff's Exhibits Nos. 455 to 499 inclusive.)

[fol. 830] March 28, 1924.

Met pursuant to adjournment.

Walter R. Addicks, a witness in behalf of the plaintiff, resumed the stand:

Direct examination (continued) by Mr. Ransom:

Continuing the subject of contracts for gas coal or purchases of gas coal for the coal year beginning April 1922, we purchased coal from the New England Coal & Coke Company, B. Nicoll & Company, the Pittsburgh Coal Company, Pilling & Company, the Pittsburgh Terminal Railroad & Coal Company, the Poland Coal Company, the Moreland Coke Company, the Seiler Coal Company, the Wentz Company, Whiteley & Foedisch, West Moreland Coal Company, the Stonega Coke & Coal Company. We also purchased through Wentz & Company as agents 121,000 gross tons of gas coal from England.

(Contracts, orders, letters, replies etc. in connection with these purchases of gas coal from the above stated companies for the coal year 1922-1923, marked Plaintiff's Exhibits Nos. 500 to 588, inclusive.)

With respect to the anthracite coal year 1923-1924, we bought anthracite broken coal for generator fuel from the Lehigh & Wilkes Barre Coal Company, the St. George Coal Company, Williams & Peters and their successors Pattison & Bowes.

(Contracts and letters of negot-ation marked Plaintiff's Exhibit Nos. 589 to 607, inclusive.)

We bought coke during the coal year 1923-1924 from the Seaboard By-Products Coke Company, the Pioneer Coal & Coke Company.

(Contracts for coke and letters of negot-ation marked Plaintiff's Exhibits Nos. 608 to 618, inclusive.)

Referring to the purchases of gas coal for the coal year 1923-1924, we made contracts with or purchased coal from [fol. 831] the Berwind White Coal Mining Company, the Koppers Company, Coaldale Mining Company, Consolidation Coal Company, Pittsburgh Coal Company, Berwind White Coal Mining Company, West Moreland Coal Company, Pittsburgh Terminal Railroad Company, Stonega Coal & Coke Company, and Boone County Mining Company.

(Contracts and orders for gas coal and letters of negot-ation marked Plaintiff's Exhibits Nos. 619 to 660, inclusive.)

I have charge of the sale of residuals that are realized and sold in the manufacture of gas, excepting coke, such as—coal tar, sulphate of ammonia, water gas tar and drip oil. We have coal gas tar at The Astoria Light, Heat & [fol. 832] Power Company, the Central Union Gas Company, and formerly the 14th Street and 42nd Street plants of the Consolidated Gas Company. This coal gas tar is sold to the Barrett Manufacturing Company, under contract of July, 1921, which contract is signed by the Chairman of the Barrett Manufacturing Company and myself.

The original cyanogen contract was negotiated by Mr. Bradley and myself, but all contracts after his death were negotiated by me. In the process of washing the gas, the cyanogen is taken out and that is then taken and compressed by a machine similar to that which is used for getting wax out of petroleum and the so-called sludge is sold to chemical manufacturing companies. The remaining portion is treated and becomes sulphate of ammonia. Cyanogen is a material from which one of the principal products is Prussian blue. We are the only company in the country that produces cyanogen from coal gas. All current sales of cyanogen by the plaintiff or by the Astoria Light, Heat & Power Company are governed by a written agreement each year. The 1922 agreement with the Henry Bower Chemical Manufacturing Company was executed by Mr. George E. Woods and Mr. Brundage, although it was negotiated by me. Under date of October 10, 1923, there was also an agreement with the Henry Bower Chemical Manu-

facturing Company as to cyanogen. In respect to cyanogen for the year 1924, there was an agreement negotiated with that company on December 14, 1923.

Drip oil is a by-product that results after the manufacture of gas and is something which accumulates principally in the holders but also in the mains and from the [fol. 833] services. During the years, 1922, 1923, and 1924, contracts were made in the shape of letters or agreements, for the sale of drip oil, to the Barrett Manufacturing Company.

The amount of drip oil we were going to have was a very indefinite quantity and we thought it would be a vanishing quantity and so no formal agreement was made with respect to the sale of it. The application of a heat unit standard not requiring so much oil led us to believe that less drip oil would be found in our mains and holders.

In the course of gas manufacture, ammonia is realized, and it then requires a by-product plant to put that in salable shape. Prior to the starting of the ammonia plant the Barrett Company bought our liquid ammonia and they finally notified us that they did not care to purchase any further ammonia in that form, which necessitated our building a by-product plant to dispose of the ammonia. So we put in an installation to enable us to sell sulphate of ammonia, or concentrate of ammonia, depending on the market. It is quite impracticable to sell the ammoniacal [fol. 834] liquor and as far as the sulphate is concerned we are selling it wherever the demand develops. It is largely a foregin demand and a vast majority of it is sold abroad. In 1923, about 80 per cent. of our ammonia and its products were sold to Japan.

It is our practice to sell any water gas tar which might be available over and above the quantity which we use for fuel. Wherever we have a water gas plant we use it for fuel largely for steam under the boilers. A contract was made for the sale of three million gallons per annum or as much of such water gas tar as the gas company may not require for its own use but not exceeding in all 5,000,000 gallons per year. This contract is cancellable on 12 months' notice, and is based upon the price of coal tar. That contract will remain in existence until 1926. Under this contract, there has been considerable correspondence

during 1922 and 1923 and 1924, with respect to quantities available and as a result of which they have been permitted, from time to time, to have certain additional tar, but in some cases they have been refused.

(Contracts and letters of negotiations for the sale of cyanogen, coal tar, drip oil, and water gas tar marked Plaintiff's Exhibits Nos. 661 to 688A inclusive.)

[fol. 835] New York, March 31, 1924.

Met pursuant to adjournment.

COLIN C. SIMPSON, a witness in behalf of the plaintiff, resumed the stand.

By the Master:

In making up my schedule I relied on the opening and construction of various mains throughout the Boroughs of Manhattan and the Bronx, and the various openings, to the number of several hundred thousand, which I referred to, made during the past ten or twelve years in Manhattan and the Bronx. Those mains and openings from which I got my information as to the character of the sub-surface structures and the sub-surface conditions, as to the character of the soil, the rock, etc., included Consolidated and subsidiary companies in such sections as there were subsidiary companies; in other words, the mains opening usually would disclose the mains of more than one company. I have the information as to the general character from my duties in supervising the openings and the construction of the mains of the subsidiary companies as well as the Consolidated's, to the extent that there are mains of subsidary companies in portions of the Consolidated Company's district. That is not true of all Manhattan, nor of all of the Bronx. I did not get my information as to the character of those portions of Manhattan and the Bronx where there were only subsidiary companies, system companies. The Consolidated Company covers all the territory and the other smaller companies or subsidiary companies are limited to sections in Manhattan and the Bronx. When I gave my testimony as to the character of the structures in the street and the soil,

I referred only to the character of the sub-structures and the soil in the portions of the territory served by the Consolidated, generally in Manhattan and the Bronx, excluding [fol. 836] the Bronx Gas and Electric territory.

By Mr. Ransom:

With respect to the main system I get information on verification of the facts as to location and quantities and size of mains from any openings that are made, by whatever company. I believe I so testified that I observed these conditions as they have been disclosed in connection with subway work or with work done by the City as well as by gas companies. Any opening which exposes mains gives me a means of verifying to some extent my own records as to sizes and location of mains.

By the Master:

The Consolidated operates in Manhattan only in so far as supplying gas to consumers is concerned, in all the territory covered by the subsidiary Manhattan companies.

By Mr. Ransom:

There is no part of Manhattan which is supplied exclusively by the Standard or New Amsterdam companies as distinguished from the Consolidated. The Consolidated is in every section of Manhattan.

Redirect examination by Mr. Ransom:

I will explain why I applied in my appraisal the prevailing rate of wages as of June 1st, 1923, for caulkers, rather than the wages which plaintiff was paying to skilled laborers who were doing caulking among various kinds of work. In the first place the men we employ to do caulking work are not regular caulkers, but if these men were continuously employed at caulking work, which is very laborious, very difficult, we would have to pay the prevailing rate of wages for caulkers. In the next place, the wages that we pay to all classes of labor discount certain elements, which are steady employement—our men are employed steadily and they are not controlled by general industrial conditions; [fol. 837] our men are not limited to a particular class of

work, we shift them around so that the lack or the abundance of one kind of work does not make them suffer; our men have the benefit of a pension system, they have free medical service, free dental service, they get sick benefits, and they are also in receipt, each one of them, of a free insurance policy in the amount of $750. Now, the nature of our work, the work in my department, requires that we work at times during the whole 24 hours of the day, and our men, therefore, have opportunities of working at other times than their regular working hours in addition to their regular eight hours, and for that they receive time and one-half, and without exhausting any of our men we are able to add considerably to their weekly wage. We are able to secure labor lower than the prevailing rates (interruption). Because of these elements I have given before, and because our labor units are small, we do not employ a great many men. If we had to do a large amount of work expeditiously we would have to go into the market and pay the prevailing rate of wages which our contractors whom we have hired on work of this sort have had to pay. If we were doing any large quantity of laying of mains, we would have to employ caulkers and pay caulkers' wages, or else hire a contractor who would hire the caulkers.

I secure, from time to time information as to the rates of wages paid by others in industries employing the same class of labor as I employ. I know what contractors in the City of New York were paying for common labor of the class that would be employed in reproducing the mains and services which I have inventoried and appraised as of [fol. 838] June 1st, 1923. In the territory of the Borough of Manhattan and the Bronx the contractors were paying for common labor, as of June 1st, 1923, as follows: Thomas Crimmins Contracting Company were paying $6.00 a day; building contractors were paying $7.00 and $8.00 a day for common labor in the Borough of Manhattan; the Hickey Contracting Company were paying $5.62 a day, that was for a nine-hour day in that case; the subway contractors were paying $6.00 a day. I applied for common labor in my appraisal, $4.80 a day.

Referring to my cross-examination by Mr. Donnelly as to the cost of laying a 12-inch main of the New Amsterdam Gas Company at 116th and 117th Streets and First Avenue in April and May of 1923, for which labor charges amounting

to $4,272.01 were made, the elements of difference between that job and the charges for that job for labor and the cost of the elements of labor which I applied in the reproduction cost of the average 12-inch main under average conditions as [fol. 839] included in my appraisal are: The labor cost which I have applied in my appraisal represents the prevailing rate of wages and is, therefore, 20 per cent. higher than the rates paid by me to the men who were doing among other things this class of work. This difference in labor on a 12-inch main would amount to 57.2 cents per foot. There was absolutely no rock on this job. In my appraisal I have figured for an average 12-inch main under average conditions in Manhattan, 10 per cent. of the total excavation rock which amounts to 75 cents per foot, for a main of this size. There was a portable air compressor on this job, which was used for 231 hours at $1.30 per hour and the per foot cost on the job was 18.3 cents. Adding that to the figure of $2.859, which is in the testimony gives a figure of [fol. 840] $4.364. There was no field supervision or maintenance of tools included in that figure of $2.859 and that will average on a main of this size 30½ cents per foot, in the Borough of Manhattan. That will make the labor cost for comparison of this particular main $4.669 as against the figure for labor on an average 12-inch main which I have used in my appraisal as of June 1st of four dollars and one-tenth of a cent, that is taking into consideration those items that are not included in the incomplete figure which was given, the total would be 4.669, against my figure of $4.00 and one-tenth of a cent.

As to the cost of materials on this 12-inch main of the New Amsterdam Gas Company, the pipe used on this job was billed to the job at a price of 62.50 per ton. That was pipe which had been purchased some considerable time previous, and I used in my appraisal the market price of 12-inch pipe as of June 1, 1923, 67.60 per ton. The difference per foot of 12-inch main on the pipe, therefore, would be 19 cents per foot. The specials used were as I testified previously less than the amount of specials used on an average 12-inch main, and I gave the reasons then for that. The difference which I analyzed and explained amounts to 2.2 cents per foot of main. Then the actual lumber charge against the job was less than the average, the actual charge was 12.1 cents and the average 12-inch main under average

conditions in Manhattan requires 38.3 cents worth of lumber of various classes per foot, a difference of 26.2 cents. [fol. 841] There is no storeroom charge on any of the small incidental materials, any of the material on the job with the exception of pipe which is directly applicable to the job. In this figure of 3.075 these storeroom items and minor materials which amount to under average conditions on a 12-inch main, 17.8 cents per foot, are not included. Taking this material cost of $3.075, you add 19 cents for the difference on the pipe, 2.2 cents for the difference on the specials; 26.2 cents for the lumber and 17.8 cents for the storeroom charge which will bring the price of $3.075 up to $3.737, as compared with the figure used in my June 1st appraisal of $3.738, a difference of one mill. Taking the figures on the same basis, the difference is one mill per foot. This job is within a few blocks of our 111th Street storage yard and the pipe was trucked from there, the average haul was very much less than the average that I have had to and did assume in figuring my June 1st appraisal. I have not figured that difference in dollars and cents, and that is not included in any figure I have given. My assumption in my appraisal was the cost of trucking pipe for a haul of one mile which you regarded as an average haul under average conditions, and the haul in this instance was a little over a quarter of a mile, from the storage yard, so that if that element of difference in trucking cost were taken into account the difference would be actually higher than the one used in the appraisal.

With regard to the laying of 248 feet of 6-inch main at 190 Street, Bennett Avenue and Broadway in May of 1923, the bare labor cost per foot was $1.43. That figure is the result from it. The difference due to labor rates exactly [fol. 842] as I testified in connection with the 12-inch main on a per foot basis is 28.6 cents. There was absolutely no rock on this job. It was laid in prism earth and the average cost of rock on an average 6-inch main in the Borough of Manhattan would be 54 cents per foot. There is no field supervision included in the figure of 1.43 nor repair nor maintenance of tools. This on an average 6-inch main will amount to 15.8 cents per foot, therefore increasing the figure previously given of 1.43 to 2.414 cents. That is, under average conditions, and after giving effect to the prices and the prevailing rate of labor as of June 1, 1923, I would have

a figure of $2.414. My appraisal for this size of main for labor cost is $2.352. This is six cents less than the figure reached in the manner I have stated. The differences on the material cost from average conditions on this particular job is exactly the same manner as testified to for the 12-inch main the pipe as used on this job was bought some time previously at 62½ dollars per ton. The market price of 6-inch pipe on June 1, 1923, was $69.60 per ton. The difference due to the difference in price of pipe amounts to 11½ cents per foot of a main of this size. There was no lumber used on this job. It was practically in the open field, and I have figured lumber on the average 6-inch main in Manhattan to the extent of 12.3 cents per foot. There was no storeroom charge included whatsoever which will average on a 6-inch main in Manhattan 7.9 cents per foot. Therefore, adding the elements I have just given you to the bare material figure brings it up to $1.657 per foot as against the figure used in my June 1st appraisal for material per foot of 6-inch main of $1.566.

[fol. 843] April 4, 1924.

Met pursuant to adjournment.

WALTER R. ADDICKS, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination by Mr. Donnelly:

Assuming that we would be required to make 537 B. T. U. gas, at the present time, I would order the present quality of oil, as provided in either of the contracts.

If we were required to furnish gas of 550 to 600 B. T. U's, I would not make any change at the present time in either case, with respect to my Standard Oil Company of New Jersey contract, but having settled upon 537 B. T. U. gas, I would experiment with other oils. I think we could use a lower grade of oil for 537 than would be required to make 650 B. T. U. gas. I do not know how much lower. I would experiment on how far we could go.

At the present time, we are using the same quality of oil for 570 to 585 B. T. U. gas, as we have been using for gas of over 600. When we go down to 537 we can get a lower

grade of oil. At the present time, we are using substantially the same grade of oil for 570 as we use for over 600, but we have not been lower than 570.

There is no stability so far in any requirement in the supply of our gas. We thought there was stability last year. It has been entirely interferred with by this new law. Now if a stable standard is adopted, I would recommend the trial of a lower gravity oil for lower than 585 B. T. U. requirements, on the part of the Engineering Department, and would govern myself in accordance with that result. I would go as low as the experiment would warrant, taking into consideration the quantity used and the net result as to cost.

[fol. 844] By the Master:

I would be in favor of trying a lower grade of oil, providing that the lower grade of oil was, first, lower in price, and the net result produced economy for the company and consumers; but not otherwise. These contracts covering the period subsequent to June 1, 1923 were only made in December. They were made in view of the decision of Your Honor in the other cases, with respect to 650 B. T. U's, and also with respect to the possibility of 537, insofar as I could go. I believe that the Atlantic Refining Company oil under this contract would fulfill our requirements for the 537. I am not at all satisfied that it will fulfill a 650 B. T. U. requirement. I am looking forward to a lower grade of oil to be used with the 537 standard, if we can definitely have it. How far we can go I am not in a position to say; it is an engineering matter, not only with respect to the plant, but with respect to the *a*ffect of the oil on the apparatus and the possible *a*ffect of the oil in the distribution, affecting the meters and what not. But I cannot testify as to where we can stop with our requirements in New York City. I would say that with the best of my ability, in these contracts, I have provided for either situation as it may develop here in the course of the next few months. I might add also that it was the most difficult thing to determine the quantity of oil to purchase, and to the best of my memory, I based it on a use of 3½ gallons, with the idea of 10% more or less, above or below. In other words, if we have to come to 650, we will get 10% more, and if we go down to

537, we will get 10% less. I have tried to cover every point in these contracts this year under a most difficult situation.

By Mr. Donnelly:

The Atlantic Refining Company was specified as Mexican oil in the original bid. In the contract, the "Mexican" is [fol. 845] stricken out, but before making that contract, we took a sample cargo of the oil into the Ravenswood Plant. The contract was entered into after the test of that oil had been made. In making this contract for 20,000,000 gallons, more or less, I took all that they could give me, and later they declined to furnish any more gas oil.

I have been buying oil for the Consolidated Gas Company and its Affiliated Gas Companies since about 1904. To the best of my memory, the provision in the oil contracts of not less than 28 degrees Baume gravity has been in force since 1913, with the provision attached to it with respect to the results of using oil which, as I testified before, was put in by me as a protection against Mexican crude oil.

Whenever I am in the market for oil, I endeavor to get all of the information I can in that direction, at the time I am purchasing.

I did not know at the time that the Atlantic City Gas Company entered into contracts on May 24, 1922, and on June 28, 1923, with the Atlantic Refining Company, for the purchase of gas oil. So far as I can recall now, I knew of the price, the range of price paid by all the gas companies in Greater New York. I probably also knew the sources from which it came, and I probably knew the quality, but I cannot at this time specify the price of a specific gas company.

In arriving at the quantity representing the company's requirements, we would ordinarily take what had been used for the previous year. We take the present experience. You cannot argue from a prior year. You have got to take what the circumstances are at the time and size up the situation as to what you think the probabilities are for the coming year—whether it is poor times or good times, or what it may be, and you must make that your best determination in respect of the quantity. When there is general depression in business, as a general proposition, you will burn less gas and use less oil. If there is a coal strike in view, you

[fol. 846] would naturally take that into consideration. A coal strike ordinarily results in more business for a few months.

The quantity of oil delivered is determined by the requirements of the plants. That is determined by the Superintendent, who makes his requisition for the oil.

The contracts do not provide for a definite delivery at any particular point. The letter requesting bids point out an estimate of those figures, but not the exact figures. The contract provides that at any one time a delivery at certain stations shall not be less than a certain amount; for instance, at 21st Street, not less than 1500 barrels. That amount is determined by the oil company, with respect to the deliveries that they are accustomed to and usually do make at those points, and that is specified by them as a protection for themselves. It is not a matter that particularly interests me. What would interest me particularly would be that it should not exceed a certain amount.

Oil delivered at Astoria by the Standard Oil Company will be delivered where it is now being delivered, at a point beyond our coal docks which I will describe in general as some distance west of Old Barren Island, on the same channel that the coal harbor barges come in. A 10" pipe line has just been put in from our oil tanks to Luyster Creek, and will be ready before the 8th, which is the date of our first delivery by steamer under the contract.

The price of oil, as provided in these contracts, includes, to the best of my recollection, the delivery into the pipe lines adjacent to the wharf. The barges ordinarily have pumps on them. Whether a barge also has steam to run that [fol. 847] pump, or whether it gets steam from the plant, I will not be able to testify as to each particular plant, but all those details you will find set forth. The steamer coming in from the Atlantic Refining Company is going to furnish its own steam and its own pumps; all we furnish is the pipe line connection and the valve and the couplings, of course, to fit the couplings of the barges or steamers.

We take a sample of every shipment of oil. We do not have a sample for test before actually entering into a contract, because we have the wide and fortunate provision that they guarantee the quality. We know what the quality is from the previous year. We have hundreds of sam-

ples, and they have to guarantee that the oil they furnish under the contract shall have as economical results as that of the previous year, which not only depends upon the oil, but depends upon the efficiency of the gas engineers of the gas company in running the machines.

I am familiar with the relation between the gas manufacturing capacity and the oil storage capacity.

Referring to the three oil contracts, as to which I testified, no member of the Public Service Commission was present at our Executive Committee meetings. Neither Chairman Prendergast or any other member of the Commission took any part in our negotiations for any of these oil contracts. I have submitted to the Commission for suggestion or approval oil contracts before such contracts were executed. The contract where I testified that I had an interview with Mr. Prendergast was on the 22nd of March, 1922. I did not execute that contract until after that interview.

I made no report of my time to the Accounting Department of the Consolidated Gas Company.

[fol. 848] Referring to our coal contracts, I made a great many spot purchases for deliveries within a limited time, both on account of the coal strike and also because of the desire to have working conditions, not laboratory, in using other coals, which were presented to me from time to time by gentlemen who came into the office and sent in their cards.

We have not dealt materially with different people, with the exception of the Roda people, as far as contract coal is concerned. The only additional people we did business with during the 1923-1924 coal year, was the Stonega Company, handling Roda coal, and I learned of that coal I think from the Seaboard Company originally, but I was not able to make a contract with them until I got an appropriation of $600,000 or $700,000 to build a wharf to take the coal, and that coal contract was dependent upon that authority. I got the authority and built the start of the new wharf at Luyster Creek and made that contract with them at that time. Then in that same year, but at a later date, I was enabled by virtue of having taken that action, to make a contract for nearly 120,000 tons of English coal to come in at the same point. The Consolidated Company could not have taken that coal from the Stonega Company before that

year by any possibility. They could, of course, have bought coal and put it in a harbor barge and transported it, but that was a commercial impossibility, I mean, not a physical impossibility.

The qualities of coal which determine its use in the manufacture of water gas are as follows: As far as the hard fuel is concerned, no reference need be made to a coal gas plant; but so far as a soft fuel is concerned, the soft fuel is used in the coal gas works, and the coke that is made therefrom is used in the water gas plant; but that coke may then [fol. 849] be considered on the same basis as the coal in the first case. In other words, it does not make any difference whether we turn that coal into gas and coke or someone else turns it into coke, because the Seaboard Company makes its coke from the soft fuel and we buy the coke. Our own works turn it into coke and you may then consider either coke or coal on the same basis.

It is desirable that the minimum sulphur should be contained in the fuel for water gas, whether it is hard coal or Seaboard coke, Virginia standard, or stored, or whether it is gas house coke. In the next place, it ought to be a fuel that will not clinker badly. For instance, we found that some of the coke from our English coal clinkered very badly. That means that the period of time occupied in clearing the fires is greatly increased, during which time we lose the use of the fire in addition to the wear and tear on the brick of the generators because of the clinkering taking off the brick with it. And then the coke should not break up readily into small pieces, it should be a good size very similar to our broken anthracite coal.

We do not like small coal, it goes all in a mass and you do not have freedom of passage of steam and gas in the generator; although I do not think that difficulty of coke is as great as of coal. Coke is a light substance and has more interstices and is more cellular than anthracite coal, so I do not think it absolutely essential to have the uniformity in the size of coke that we would prefer to have in the coal.

With respect to the clinkering, it is desirable to have a high or relatively high fusing point of ash. In other words, while we have it as low as 1,900, I think the lowest we have had in any coke that we have had to purchase, much of the coal and coke may be as high as 2,300 or 2,400 degrees fus-

ing point. Of course, you can see that the low fusing point [fol. 850] will make more clinker, because they run together and clinker at the low temperature.

I think those are the principal ones. The liability of the coke to break into pieces is undesirable, while you want a hard fuel that will hold its shape during the process of manufacture. In other words, if you start with a piece, we will say, 4 inches in diameter, which will decrease uniformly without going all to pieces into dust, or not into dust, but into fine particles like gravel, you do not want to obstruct your generator in the manufacture of your gas and you do not want it to clinker badly, as the difference in time of cleaning may be 100%, which, as I said, makes a high labor cost, a higher repair cost, and also very much reduced capacity out of a given machine. I do not know whether I have answered that adequately or not.

[fol. 851] April 7, 1924.

Met pursuant to adjournment.

FRANCIS K. STEVENS, called as a witness on behalf of the plaintiff, being duly sworn, testified as follows:

Direct examination by Mr. Ransom:

I am a real estate appraiser. I am 47 years of age on June 8, 1924, reside at Gladstone, New Jersey. I have lived all my life in New York City and vicinity. I am a director and a stockholder of the corporation known as Brown, Wheelock, Harris, Vough & Co., Inc., formerly known as Brown, Wheelock & Company, Inc., successors to Douglass Robinson, Charles S. Brown Company, having offices at No. 14 Wall Street, No. 20 East 48th Street and No. 101 First Street, which is engaged in an extensive general real estate business throughout the City of Greater New York and its vicinity. I was a stockholder of the original company when it was formed on May 1st, 1905; Mr. Robinson of that firm died. I am also a director of the Port Morris Land & Improvement Company, which owned two pieces of water front at Port Morris and several blocks and lots in the vicinity; I am Vice President of the

Samuel Stevens Realty Company, which owns six hundred feet of water front at Long Island City, East River.

I graduated Ph. B. Yale University in 1897; Sheffield Scientific School. I worked in 1897 with the Sixth National Bank, afterwards the Astor Bank, until 1899. Have been in the general business of real estate, buying, selling, making loans, managing properties and appraising since the winter of 1899-1900. I started in that business with Mr. Douglass Robinson before he combined with Mr. Charles S. Brown, on May 1, 1901, and have been with him and the firm and its successors ever since.

My duties as an appraiser have been and are to value property, and to keep in touch and be familiar with the [fol. 852] sales and leases of properties in the City of New York and vicinity. We keep maps, files and records of the sales and leases and transfers. We take the "Record & Guide" and numerous other real estate and building papers, and we make efforts to inform ourselves of the prices and conditions of the sales where nominal considerations are stated. As stockholder of the corporation, I participate in all the commissions and business of the corporations. As Vice President in charge of the appraisal department, I initial all the commission slips, showing the data of each sale. The office books and negotiations of the corporation are open to me, and it is my business to keep myself informed of the conditions of the office sales and management.

I have been employed and testified as real estate expert for the following:

State of New York—In the matter of the Barge Canal Terminal at Newton Creek; also Northwest corner Maiden Lan*d* and William St. I appraised for the New York State Transit Commission, Harlem River, 150th & 151st Street.

The City of New York—In the matter of the condemnation of the property situated at Gowanus, Red Hook section; for the terminal of the Marginal Railroad—ten or more city blocks in all. Also in the changing of grades in Canal Street, five pieces on Chrystie, two in Canal and five on Division Street.

I have also been employed as real estate expert by property owners and testified against the City in certiorari pro-

ceedings in the matter of No. 30 Broad Street, No. 18 Broadway and Nos. 215-225 West 42nd Street through to 43rd [fol. 853] Street, and many others. I testified against the United States Government in regard to the value of property situated in Newark Terminal on Newark Meadows. Was consulted by representatives of the United States Government in connection with an appraisal of real estate in the condemnation proceedings of the property they took over between 58th and 65th Streets, South Brooklyn. Was one of the eight New York appraisers chosen to pass and render a report to the City of New York on the value of the property to be exchanged between the New York Central Railroad and the City of New York, which included all the property in discussion between the Harlem River down to St. John's Park, including piers, bulkheads, land under water and upland, easements above, under and on the street level, etc., franchise rights in streets and along Riverside Drive.

I have been employed by and testified for many private owners in different proceedings, some of which are:

2 West 46th Street, Osgood Pell Receivership, Northeast corner 5th Avenue and 52nd Street before Judge Brown, McCready against McCready. Northeast corner 5th Avenue and 31st Street, Judge Mayer. The Wilkes corner—southeast corner of Wall and Broad Street, in the matter of lease to the Stock Exchange. The Mills Building, Broadway and 38th Street. New York Theatre Plot. Northwest corner Central Park West and 92nd Street. Also block from 81st to 82nd Streets. Many infancy proceedings, etc.

I appraised the property of the New York Railways Company for the Receivers and testified before the Master appointed by Judge Mayer or Judge Hand. I appraised in 1919, the properties belonging to the Consolidated, Northern Union, Central Union, Amsterdam, Standard, Mutual, [fol. 854] Astoria Light & Power Companies, and testified in some of the cases. I also appraised real estate and testified in condemnation proceedings for the widening of the Bronx River for the Northern Union Gas Company. I have made appraisals for the United States Government, State of New York, City of New York, Mutual Life Insur-

ance Company, Equitable Life Assurance Society, Bowery Savings Bank, Seamen's Bank for Savings, Greenwich Savings Bank, Prudential Life Insurance Company of Newark, Guaranty Trust Company, Winthrop Estate (95 pieces), Sailors' Snug Harbor (more than 50 pieces), Rhinelander Estate (60 odd pieces), Van Bueren Estate (70 odd pieces). I appraised for the purpose of sale all the Henry Astor property which sold at auction in 1920, and many others. Also for many law firms, etc. I have made many appraisals, leases, sales and loans on property situated throughout the Greater City of New York and vicinity.

My firm is a member of the New York Real Estate Board and the Brooklyn Real Estate Board; and I am a licensed broker of the State of New York.

I am responsible for the company's appraisals, and I pass on more than half a billion dollars' worth of property a year in the appraisal department. The value of the property which is under the management of my company exceeds one hundred million dollars. I am familiar with the lands described on sheets No. 1, 2, part of page 3, 4, 5, 6, part of page 7, 8, 9, 10, 12, 13, 14, 15, 16, 17, 18, 19, 20, and 21, of Pltff.'s Ex. 258, and with the lands described on the various sheets of Exhibits Nos. 261, 264, and 265. Exhibits 261, 264, and 265 are the Astoria property, but that [fol. 855] was given on page 21, they are certain properties which were shown partly in blue and partly in pink. The copies of these diagrams which I have before me were furnished me by Mr. Alrich of the Consolidated Gas Company.

I am familiar with the values of real estate in the vicinity of the land described in the sheets of the exhibits which I have mentioned. It is my business to keep myself informed as to the sales, leases, mortgages and other transactions relating to real estate in the parts of the City in which the lands shown on the sheets of the exhibits mentioned are located. I do that all the while to the best of my ability. At the request of the Consolidated Gas Company I made an appraisal of the lands described on the sheets of the various exhibits referred to and which are before me, such an appraisal being made as of June 1, 1923. I have worked on these appraisals from August of 1923 to practically up

to date over them. My figures were placed and practically finished by November 1923. I visited each parcel of land described on these various sheets of various exhibits to which I have referred.

I have formed an opinion as to what the value was of the lands unimproved and the value of each parcel of land unimproved as described on the various sheets of the exhibits to which I have referred. I have prepared schedules setting forth what in my opinion was the value, on or about June 1, 1923, of each parcel of land unimproved. In arriving at my opinion of the value of these different parcels of land, I assumed that the dimensions so laid out on those sheets were the correct dimensions, and I have made my appraisals according to those dimensions. I have listed that by block and lot numbers and locations by value. That applies both as to the properties of the Consolidated Gas Company, and as to the properties of the Astoria Light, [fol. 856] Heat & Power Company, and also certain properties owned by the Standard Gas Light Company and the New Amsterdam Gas Company which are shown in Exhibits 264, 265 and 261. If asked the question as to the value unimproved on that date of each of these lots and blocks and parcels, I would testify to the value which I have set out here.

Value of Land (Unimproved) as of June 1, 1923, as Described on Sheets Nos. 1, 2, 4, 5, 6, 8-10, and 12-20, Inclusive, of Plaintiff's Exhibit No. 258, Consolidated Gas Company v. Prendergast

Block	Lot	Location	Value
239	1, 5	Hester & Elizabeth Streets	$175,000
368	1	11th St. Mnfg. Station	465,000
369	1, 10-11-12-13-14 and 15	" "	671,000
382	22	" "	357,000
989	3	15th St. Holder Station	210,000
870	60 and 47	130 E. 15th St.	510,000
985	7, 19, 20	E. 17th, E. 18th St.	216,000
951	35	E. 21st St. Station	65,000
952	7, 29, 30, 35	" " "	396,000
953	1	" " "	552,000
978	5, 6	" " "	491,000
979	1, 27	" " "	571,500
987	37	" " "	133,000
1090	23	W. 42nd St.	135,000
1092	16	44th St. Station	302,000
1093	9	" "	351,000
1028	38	212 W. 57th St.	669,000
1457	6	E. 63rd St.	179,000
1157	1	W. 66th St.	1,057,000
1177	21	" "	440,000
1670	1	E. 99th St. Station	464,000
1692	1	" "	260,000
1682	8, 11	E. 111th St. Station	368,000
1683	18	E. " "	83,000
1704	5	" " "	362,500
1712	2	" " "	78,250
1642	33	E. 114th St.	46,500
1998	50, 53, 54, 55, 56	W. 132nd Street	80,000
1999	1	" "	227,000
2108	23	474 W. 159th St.	21,000
2497	132	Cromwell Ave. & 153rd St.	200,000
3236	1	Kingsbridge	250,000
2770-2775-E 2775-F, 2775-G 2775-H, 2776 2777-J, 2778, 2780 2781		Hunts Point	2,350,000

In the foregoing figures there is not included any allowance for the additional element of conjunctive value where the company owns more than one block adjoining. There is, however, an additional value for the ownership of more than one block adjoining where the purposes for which the property is to be used require a space greater than a block.

[fol. 858] Astoria Light, Heat and Power Company, Astoria, Long Island City

Value of Land (Unimproved) as of June 1, 1923, as Described in Plaintiff's Exhibit No. 259, Consolidated Gas Company v. Prendergast

Block	Lot	Location	Stevens appraisal
849	1	Astoria, L. I. City	$24,000 00
850	1	" "	4,000,000 00
859	1	" "	36,400 00
860	1	" "	34,300 00
870	1	" "	34,300 00
871	1	" "	36,400 00
881	1	" "	36,400 00
882	1	" "	37,300 00
893	1	" "	50,000 00
894	1	" "	85,000 00
895	1	" "	32,000 00

Standard Gas Light Company of New York

Value of Land (Unimproved) as of June 1, 1923, as Described in Plaintiff's Exhibit Nos. 264, 265, Consolidated Gas Company v. Prendergast

Block	Lot	Location	Value
1456	17	East 62nd St. Station	$205,000 00
1457	17	" " " "	197,000 00
1475	1	" " " "	52,000 00

In the foregoing figures there is not included any allowance for the additional element of conjunctive value where the company owns more than one block adjoining. There is, however, an additional value for the ownership of more than one block adjoining where the purposes for which the property is to be used require a space greater than a block.

[fol. 859] New Amsterdam Gas Company

Value of Land (Unimproved) as of June 1, 1923, as Described in Plaintiff's Exhibit No. 261, Consolidated Gas Company v. Prendergast

Block	Lot	Location	Value
989	16	E. 15th Street Holder Station	$136,000 00

Cross-examination by Mr. Donnelly:

The appraisal department of my firm are myself, as head, Mr. Spear, Mr. Eckers, Mr. Charles S. Brown, Jr., Mr. Kaplan, Mr. Towers, Mr. Edsal and Mr. Canavan. Until 1908 I was a broker, and managed the Park Row Building, I think, for the first year that I was in business. Then I went out as a broker. In 1907 or 1908 I went into the appraisal department and learned the business under Mr. Charles S. Brown, Sr. In 1913, we put the appraisal department on a separate basis. I say, "Separate basis," because it was put under the control of myself, Mr. Spear and Mr. Eckers, and with Mr. Brown as supervisor. Since 1918 I have been in charge of the department. Our activities go all over the Greater City of New York, that is all the boroughs. I bought and sold gas properties in 1906—I won't be sure of the exact date—The East 62nd Street property. I bought some time around that time on West 65th Street a piece for them. I just sold for them—the contracts are not signed—East 42nd Street. I sold their West 44th to 45th Street frontage and 12th Avenue. That last sale I made, I was in the negotiations and directed the negotiations about a year ago. I think I have been con-[fol. 860] sulted in most of their sales in the past five or six years, whether they should sell or whether they should accept certain prices and as to the terms which should be made—what I thought were safe propositions. That would include 60th Street and Avenue A; 44th Street and 12th Avenue; the 18th and 19th Street properties, and 13th Avenue; 32nd Street and First Avenue; 132nd Street, to the Studebaker Corporation, that is west of Broadway. A good many more I could not swear to right off the bat, but I think most of their sales I have been consulted in.

Mr. Day does most of the buying and selling of gas properties. In 1919 or 1920 I sold to them from the Port Morris Company some water front at Port Morris. Buying and selling is not my business, though I am consulted in the negotiations, and it is part of my business to help the brokers in the negotiations in all the sales of our office; my business is appraising for loans and for all purposes. (Purchasers, buyers, sellers, all business.)

In 1906 I bought East 62nd Street, for either the New Amsterdam or Standard Gas Company, I acted for Mr. Doane. I got a letter in the mail this morning showing a picture of the house that stood on that property. It is Jane Tollers' and at that time it was practically—it was vacant land. It stood up on a knoll and ran down to First Avenue. The holder now stands on the First Avenue frontage and they had to cut off the balcony that looked over the river, that was on the easterly end of that house. At that time it was occupied by two old Miss Tollers, and the stone house stood up about 20 feet—12 feet, I should say, above the street, and you went up on a stairs, and I had a very [fol. 861] amusing time purchasing that.

The property bought on West 65th Street had a tenement and coal hoppers of a coal company—the P. G. Kemp Company. I moved them back to the land right in the rear, which I purchased for my mother. I do not remember for whom I acted or to whom the property was sold without looking up my records.

The property on East 42nd Street, just sold, is vacant property with a few old buildings on it, which is water front, and has a piece out of it that was sold to the Belmont Tunnel—East River Tunnel there—to Blackwell's Island, and the westerly end, which was not included in the sale, has buildings belonging to and used by the gas company. I say, "Gas Company"—a gas company. It is not the Consolidated. I think it is one of the other companies.

West 44th to West 45th Street frontage, on 12th Avenue was sold for the Consolidated to F. L. Smith Machine Company. That was the northeast corner of 44th Street, vacant property which stood, I think, about two or three feet above grade. The city had condemned the property

to the west of it and it was in a rather unfinished condition. Their holder is to the east of that property.

As to the property at 60th Street and Avenue A, the frontage on Avenue A was rock and above grade, though not as much as the rear land. I should say there that that was about four to ten feet above grade. They blasted out the rear part of that and in the rear of that was quite a large knoll with an old frame dwelling standing on it. All of that block front has been sold and I was called in to express opinions and advice on that, but I did not act [fol. 862] as a broker there. If I remember rightly the frontage was sold about two years ago and the last piece was sold about a year ago, I should say—perhaps a little more. At that time it was not occupied by a gas manufacturing plant. I do not remember whether I ever bought or sold land on which, at the time, there was actually a gas manufacturing plant; buildings and the equipment that goes to make gas, on it.

The Port Morris Company did not buy the Port Morris Property, they were the sellers in that, and sold it to the Consolidated Gas System. I have forgotten the extent of the waterfront, I think it was a block, or it might have been a block and a half. We made two sales in that waterfront and I do not think that that particular piece we sold to the gas company was bulkheaded. There may have been some old rip-rap there. The upper piece was well bulkheaded, but I don't think the lower piece was. I did not burden my mind with the thing. That was vacant property. We sold all the right, title and interest out to the pierhead line, which was practically identical to the bulkhead line at that point. It included land under water, because I don't think that we were filled out on that land to the bulkhead line; the pierhead line, was outside. I think it was about 75 to 100 feet outside of the bulkhead line at that point, and we sold all our right, title and interest to whatever land under water we owned or might have title to, went with the sale, and we decided the terms of the sale. In other words, we got the parties together on the price at which it was bought. That included that and the Schaffer Brewing Company properties, in the rear land on the two blocks in the back, on that Port Morris [fol. 863] waterfront, and I lined up both properties. We

made these appraisals, at the request of C. G. M. Thomas, one of the Vice Presidents of the Consolidated Gas Company. He gave me the written notice I think, to proceed with it, in August—the early part of August of 1923. He had talked with me unofficially several times. Whenever I saw him we general talked over these different things and I knew that probably this case would come on—well, just before that, how much I do not know. I knew what the appraisal in this rate litigation was to be used for. I appraised all this property in 1920—the last case, I think, for the affidavits on the motion for the injuction, and on the motion for the injunction in this case. I signed affidavits for that. My values there were before December 31, 1922—I mean I think they were January 1, 1920. I did not make any appraisals on or about June of last year. I signed an affidavit in which I said that the figures that I used in my former appraisal I thought had been increased. My former appraisal was made, I think, as of—I thought in 1920. I made the appraisal for the other companies as of January 1, 1919. I think I made those appraisals as of—it may have been 1920. In this present case I made an affidavit which stated in my opinion, their value was as much or greater than they were when I last appraised them, but I did not appraise them at that time. The lump sum of the appraisal I made formerly represented the aggregate value of all the parcels as to which I testified here. I personally examined these parcels for the purpose of the appraisal, more than once. I could not give you any definite number of times, for I was in and out [fol. 864] of the properties. I am past them all the time. Whenever I can I go out and study then up. I would not have any idea as to the number of times I have visited those properties, for I did not keep a memorandum of the dates when I visited them; that is not my practice in making these appraisals. I am never prepared to state the number of times I visited each individual piece of property for the purpose of making an appraisal. I have visited those properties more than once; as a matter of fact many times. How many times I could not tell you; it might have been four, five or ten in all, or not. I could not give you more than that I have examined this property more then once; that is all I can say definitely. I examined a piece of

property as many times as I think it necessary for me to form an opinion.

The 11th Street, 12th Street, 62d Street, 63rd Street, 99th Street and the 111th Street properties I think I visited oftener than the others, as little questions would come up in my mind on which I would want to refresh my memory as to the water front, the depth of the water and the general conditions. All these last mentioned properties are water front properties. The measurements on the diagram of these sheets were furnished to me through Mr. Alrich's office and I assumed they were correct; I am not a surveyor. I used the city maps which give the dimensions and in some cases these city maps did not correspond, but in general they did correspond. When there were little measurements that I wanted to approximate I may have approximated from the city maps, but the measurements as given in the outline of this property I used from this exhibit. I had practically completed in November 1923 my appraisals as of June 1, 1923. I submitted my figures in [fol. 865] December or January to Mr. Thomas, I think. Between the time I submitted them and the present time I made changes in the figures only on the question of sizes where dimensions were changed; that is from December 1923. In 132d Street, on the original appraisal I was asked to appraise Lot 16, which I believe was acquired after 1923, and I was asked then to put a figure on that plot, leaving out Lot 16.

My estimates are of the land only, that is the unimproved land, without any regard to the question of whether or not those various parcels of land are occupied by buildings or other improvements. I appraised the 15th and 16th Streets, Avenue C plot (Plaintiff's Exhibit 258). On Sheet 3, of this exhibit I appraised Block 989, Lot 1; that is the only one on the sheet that I appraised.

On Sheet 7, the only appraisal I made was the plot on the northerly side of 42d Street, Block 1090, Lot 23. I appraised Block 1998, Lots 50, 53, 54, 55 and 56.

In the affidavit I made on June 7, 1923, I set forth the various parcels I appraised, and I stated in that affidavit "In my opinion the market value of the land above described" referring to the parcels included in my appraisals, "that the Consolidated Gas Company used in its gas busi-

ness as of December 31, 1922, was not less than $13,166,981, and that the value thereof as of that date or as of the present time is at least that sum."

In regard to Sheet 1, plaintiff's Exhibit 258, I ap- [fol. 866] praised all of the land, including Lot 7 that is scratched out—which land is shaded in blue on the sheet. I understand that Lot 7 has been consolidated, under the tax maps, with Lot 5.

On sheet 1, upon the part shaded in blue, there is an old two-story brick building on Hester Street, that stands back from Elizabeth street, 12 feet. In the rear there are three-story brick buildings; they are all good structures, I should judge from looking at them from the outside, but I made no examination of any of the buildings on those properties. I arrived at the estimate of the value of the land there from my experience as a real estate appraiser and from the different sales in the neighborhood, and I divided into mathematical units and checked myself up with those and compared them with the neighborhood sales.

Block 239, Lots 1 and 5—I took them as one parcel and arrived at the figure of $175,000. I did not divide that between the two; I considered them as one parcel. I used a unit on Hester Street of $22,500 and on Elizabeth Street $18,000; there are 4 units on Hester Street, which makes it $90,000, corner and key lot 60%—50% for corner and 10% for the key lots, 60% or $13,500. Elizabeth Street had two lots at $18,000 apiece.

The other portion is 25 feet and 109 feet 8 inches deep. I added three per cent. for extra depth on that, and that made a figure of $18,725. that total totaled up $158,225. I added ten per cent. for size, $15,822. which made it $174,074. I thought it was worth $175,000.

I did not value it on the basis of so much a square foot. In arriving at my values for this land I took into consideration that we had sold the Children's Aid Society, the southeast corner of Elizabeth and Hester Streets and the south- [fol. 867] east corner of the Bowery and Hester. The Record and Guide shows we sold 44 Elizabeth Street in 1919, 82 Elizabeth Street in 1921, 84 and 86 Elizabeth Street in 1921, 90 and 94 Bowery were sold in 1920, 165 Hester Street in 1921, 173 Hester Street in December 1922, northwest corner of Canal and Elizabeth Street in 1923, 52 Elizabeth

Street in December 1923, 161 Elizabeth Street in July 1923, 75 Elizabeth Street in 1923. The nearest of these parcels would be 82 Elizabeth Street and the next to that would be the northwest corner of Elizabeth and Hester Streets. In the absence of a sale nearer in time to June 1, 1923, than 1921, I would take the 1921 sale as a guide to the value. All of the properties as to which I have testified as to these sales were improved properties with tenements, dwellings and lofts, and the sales were of both the land and buildings. To arrive at a criterion or a test of the value of the land unimproved shown on Sheet 1 as of June 1, 1923 I took these 11 sales and averaged them up and then I took the assessed value of those properties at the date on which they were sold, and I found, of the 11 sales, that the sales value over the assessed value was 122 per cent. on those 11 sales. Each individual sale of those 11 sales was 140%, 180%, 92%, 128%, 138%, 110%, 130%, 118%, 85% and 180%. I checked and multiplied the assessed value of the land by [fol. 868] 122 per cent, and found that it made $176,000 and my figure was $175,000. It is my opinion that the value of that land of that size at that point is worth $175,000. I use sales of improved property to check up my opinion of the value of the property, and if the sales are way out of proportion to my values, then there is something wrong and I go back and refigure it and look at it again. If the sales come pretty close to my judgment of what properties are worth, I know I am pretty close to the market. In making our appraisals, when we are making an appraisal of property as a whole, we figure what we think a total is worth, then we subtract what we think is the value of the land and that represents building value, but in this parcel, I valued the land only. I did not give any consideration to the presence of the buildings in arriving at the value of the land. We have not bought or sold any property in the vicinity of this property since the southeast corner of Bowery and Hester in 1920. We manage No. 18. We manage and rent the northwest corner of Canal and Bowery. These eleven sales were executors' and trustees' sales, but I had personally check- them up and knew their values, by talking with the broker or the man who sold it. Out of these sales, there were only two that were stamps, and there the mortgage was $95,000 and the stamps only five.

I made no inquiries at all as to what the land was sold for. 82 Elizabeth Street was sold for $42,500, but it cost the Consolidated Gas Company $43,200. There was at that time an old five-story brick loft building on that plot. The [fol. 869] assessment on the land was $17,500 and the building $5,500.

Lot No. 1 of Block 239 is a corner lot and comprises all of the Hester Street frontage and about 100 feet on Elizabeth Street, and I added 50 per cent for the corner and 10 per cent for a key lot.

84 and 86 Elizabeth Street were sold in November 1921 by Michalover and others to Mariangala Cacciola, for $76,000 and assessed at $70,000. This lot was 49 feet 5 inches frontage by 102 feet in depth and includes two old six-story tenements and stores and a 15 foot rear court. The assessment on the land was $32,000 and on the buildings $38,000. I would say that the land was worth about $36,000 or $37,000, as against a land assessment of $32,000. Assuming that the two old six-story tenements were in fair condition, my offhand appraisal would be about $19,000 or $38,000 for the buildings and say $36,000 or $37,000 for the land or about $74,000 or $75,000; sold for $76,000. These buildings added to the value of the land, but I do not think that the buildings on the property shown on Sheet 1 add anything to the value of the land.

[fol. 870] In arriving at the valuation that I have given for Block 368, Lot 1, I divided it up in lots and certain areas in square feet. The waterfront I valued on the square foot basis because it was irregular. The property fronts on Tompkins Street, but I figured those lots facing on Tompkins Street at so much a square foot. I did not figure it as waterfront property. I figured on the square foot basis, an area 100 feet from Tompkins Street. In regard to the balance of the block, I used front foot, or lot values. I used a unit per lot on Avenue D of $10,000; on 11th Street, $8,000; 12th Street, $8,000; and for lots facing on Tompkins Street, $9,000. This lot had 206 feet 6 inches frontage by 100 feet in depth. A unit of $10,000 equals [fol. 871] $400 a front foot,—206 feet 6 inches by 400 equals $82,600 and I added 40 per cent each for two corners. The 11th Street frontage averaged 397 feet 11 inches by half the block and I used a unit of $8,000 or $320 a front foot,

equals $127,334. The 12th Street the average frontage is 348.75 feet by half the block at $320 a front foot equals $111,600. The Tomkins Street lots are 20,650 square feet. I arrived at those square feet by multiplying 206 feet 6 inches by 100, and although the Tomkins Street frontage is 228 feet actual frontage, I only gave them the 20,650 square feet in that, or $3.60 a square foot, $74,340, making a total of $403,874, to which I added for size 15 per cent, making a total of $464,455. I thought the land was worth $465,000.

Block 368, Lot 1, is occupied by a gas manufacturing plant. I could not tell you the character of the buildings, they are so mixed up with holders, furnaces, office and brick buildings and little railroad tracks running through it. The easterly end has an iron and frame shed built on a platform, rented from the city. The City owns that part of the land. I assumed the property would be used for any purpose that needs that sort of property—lumber yard, coal yard, manufacturing plant. The National Biscuit bought very similar property on 15th Street and Ninth to Tenth Avenues, and then from Tenth to the river. Tompkins Street at that point is about 75 to a 100 feet wide, but it is not laid out, so I would have to take it from a map. Tompkins Street is not laid out. It is not a regular Street. It is occupied by the gas company in this way,—there is a platform dock built on piles over it. The bed of Tompkins [fol. 872] Street, the street between 10th and 11th Streets, is land under water today and boats are standing there. It is not a travel street and never has been. It begins at East Fourth Street to be an open street and runs down to Grand Street, and that is the only place where it is physically opened. About Fourth Street it runs right into water and there are city piers standing on the bed of it and boats and barges are brought in over it and the used bulkhead line is behind, to the west of Tompkins Street. It does not open and become a used street again until practically after you leave 14th Street. I do not know whether that street is called Tompkins or Marginal Street. There is an open street between 14th and 15th Streets on the East River and it only runs for a block there, and then again it is cut off by the hospital, by the city. The city there again takes it. Then it stops entirely at 17th Street and the piers start in.

There were two very pertinent sales in there that helped me check up my opinion on the value of the frontage on Tompkins Street, and that was the foot of 10th and 11th Streets, the very next water front to this property, which was sold in January, 1923 by Anna W. Peter, Administratrix, to the Vacuum Oil Company, who bought the entire waterfront block from 10th to 11th Streets and running on 10th Street 180 feet. That sale checks up on my units to the price paid, almost to the dollar. Then there was another sale in November, 1923, of 13th to 14th Streets of that plot from Avenue D to the river. Still another sale in that vicinity was that made to the Eagle Pencil Co., Avenue D, 13th to 14th Streets, in 1919. I think a sale made [fol. 873] in 1919 at that location would be a criterion for the value of this particular piece of property on June 1st, 1923.

Aside from the manufacturing plant of the old Mutual Gas Company at 11th Street, there is no other manufacturing business done in that immediate neighborhood; there are mostly lumber yards. At the time of its sale in November, 1922, the property at 13th to 14th Streets from Avenue D to the River was being used as a City dump. There is a big basin that is dug out there and runs into this property, and I have seen plenty of scows, which are used in connection with the Burns Coal Yard. I think the property was sold to the Edison Electric Company.

The assessed valuation for 1923 and 1924, on Block 368, Lot 1, was $375,000. I do not know what is was for 1922.

I took into consideration in arriving at a valuation of the 11th Street properties, the sale of the property on the north [fol. 874] side of 10th Street, that I have already testified to, and the properties that we managed on the north side of 8th Street. There were several sales to the west of this property. I appraised and valued for the New York City Railways Company their property just to the west of this property and from 10th to 11th Streets. They sold their land at public auction and that was an aid to me. In valuing a large block of this sort, individual sales of tenement houses do not give you your lot value, in my opinion. There were no other sales in that block that I took into consideration. They might have had tenement houses on them, but

tenement houses do not sell well in this district as it is a manufacturing and business section and tenement houses are no criterion in my mind to the values of a large block by comparison of waterfront and rear land. The property of the New York City Railway Company was sold at public [fol. 875] auction some time since 1919. They owned the north side of 11th Street, Nos. 711, 713, 715, 717. There were two buildings on there, a garage and a laundry; and also on the south side of 10th and 11th Streets, 704 to 708 Eleventh Street running through to 2406 to 2411, and then that garage 710-716 Eleventh Street with an outlet on Drydock Street of 20 feet, and running through, including three buildings on the north side of Tenth Street. All that property I appraised and testified to in the proceeding in which Job Hedges was receiver.

The property bought by the Eagle Pencil Company is being used for their manufacturing business. This plot was 206 by 188 andwas in three pieces, owned by three allied estates, coming down from the original Lorillard Estate; there were two pieces 50 by 200 running through from 13th to 14th Street and constituted the easterly line, 82 feet west of Avenue D; and then there was the entire frontage on Avenue D which comprised the little old tenements, buildings of little or no value and which were all pulled down and the Eagle Company have built there new buildings on it—a six or eight story building has been put up on part of that block. The one story old buildings added nothing to the value of the land. The lot 50 by 200, 148 feet west of Avenue D, sold for $65,000; the Kent Estate sold the next 50 by 200 feet for $65,000; and we sold the block front for $125,000, making a total of $255,000 for the parcel 200 by 188. Those properties were assessed at the time we sold [fol. 876] them for $34,000, $35,000 and the block front for $83,200. I thought the sale price was high, but I didn't put any value on that property or record, although I advised the acceptance of the price. In my appraisal, for the inside piece on 14th Street, running through to 13th Street, which we sold for $65,000, I do not believe I would have put over $50,000 to $55,000 on it. The next piece would be approximately the same and on 14th Street. I doubt very much much whether I would have put $100,000 on that Avenue D frontage at that time. This is all guess work and I do not care to be held down to it.

We sold it for $255,000, and the purchasers purchased it as land value. They did not consider the buildings on it of any value at all.

Lot 14 of Block 369, as shown on Sheet 2 of Plaintiff's Exhibit No. 258 is 39 by 213, the 39 feet on the East River. I gave that plot a valuation of $2 a square foot. That is rather a peculiar situation there—it is land in the water outside of the bulkhead line. The City in recent years has absolutely refused to give a private owner the right to extend a pier in front of their property, reserving the right, if they wish, to build piers at the foot of each street, but they cannot force you to take it down; and therefore they cannot construct, reasonably, a pier at the foot of 12th Street at that point. That value is an arbitrary value on my part put on land under piers. That value varies in different parts of the City. On the North River the City charges you $15.60 on the basis, I think, of $15.60 or more per square foot for the extension right of a pier, and these [fol. 877] are things to which I have given consideration in arriving at the valuation of $2 per square foot a year. The situation at Newtown Creek is comparable to the situation at lot 14, except that they are pier rights values in the East River and there have not been any sales in the immediate location of pier rights in recent years. The last piers that were condemned by the City were further south and I do not think are comparable, but I think that they established there as high $11 to $12 a square foot value.

In my appraisal of this Lot 14, I thought it had that value of $2.00 per square foot to the property. It gave you 213 double, which is 426 feet, plus 39 feet, which is 465 feet of extra wharfage. I am valuing the bulkhead rights and the City agrees with me in that at $300 a front foot.

In making my valuation of $2 a square foot, I assumed that so long as the pier stood there and the City could never take that pier away without just compensation, it could be fixed up for the purposes of tying boats up to it and landing cargoes on it.

I testified in the Central Union Gas Company case, in 1921 or 1922 and also in the condemnation of the Bronx River Proceedings of the Northern Union case, in which land under water was involved and in both of those cases I appeared for the gas company. I have looked over all the

[fol. 878] leases that the City made in that neighborhood and that helped in arriving at those figures. A bulletin issued every year gives the leases and values and the space leased and all the various land under water, bulkhead rights, street rights, adjoining bulkheads in the Greater City of New York. Most of the small leases by the City are for one to three or five years and are revocable, but they make some of their leases to the big steamship com-
[fol. 878] panies on the basis of ten to fifteen years. The property at the foot of 8th Street on the East River is used for a lumber yard, garages, a swimming pool and I think there is some machine shop work in there. I made no separate valuation of Lots 10, 11, 12 and 13, beyond adding it as bulkhead rights to the entire block. Lot 13 has a frontage on the basin of 239 feet, Lot 12 has 25 feet, Lot 11 of 113 feet 6 inches, and Lot 10 of 52 feet. Lot 15 has a
[fol. 879] frontage on the East River of 160 feet 6 inches and is also included among the bulkhead rights.

Of the total valuation of $671,000. Lot 15 was worth $48,150 or $300 a front foot; lot 13—$300 a front foot, or $71,700; lot 12, not being of sufficient length to tie a boat to I gave it no value at all; lot 11—$300 a front foot; and Lot 10 no value at all. I assumed the plaintiff had the right to collect wharfage, tie boats on there and collect on them, along their waterfront.

In making my valuation of Block 369 Lot 1, I mathematically divided it into units. Avenue D unit $10,000, 12th Street $8,000; 13th Street $8,000, the lots immediately adjoining the bulkhead $10,000.

The bulkhead rights, as I had testified to before, $300. a front foot, and the pier rights at $2.00 per square foot.

I gave an added value of 40% for the two corners on Avenue D,—one on 12th Street and one at 13th Street. The assessed valuation for 1923 on Lot 1, was $409,000, but I am not sure whether that assessment covers the bulkhead rights and pier rights, it was so complicated that as it was not material to me, I just put down the amount. I did not
[fol. 880] take the assessed valuations into consideration, in making up my appraisals. With reference to Block 382, Lot 22, I made up my appraisal as follows: Avenue D, $10,000; 12th Street, $8,000; 13th Street, $8,000; and I divided them up into lots 100 feet deep facing on Avenue D and

added 40 per cent for each of the two corners. The property on the north side of 13th Street is worth $9,000, because it has a backing on 14th Street. West of Block 382, you have the Eagle factory, some tenements and on the south side there are some old stables right next to the Mutual Gas Company's works. The White Fusel Oil Co. is located in the block between Avenue D and Dry Dock Street and 11th and 12th Streets, and I think west of that there are some tenements. There are stables, garages and some buildings on the block between Dry Dock Street and Avenue C and 11th and 12th Streets. This lot was assessed for the year 1923 at $300,000 and I think it was the same for 1924.

With reference to Sheet No. 3 of Plaintiff's Exhibit 258, I included in my valuation only Block 989, Lot 1, described as the 15th Street Holder Station. I have examined this on several occasions. I made up my $210,000 appraisal as follows: Avenue C $10,000 a unit; 15th and 16th Streets $7,000 unit; and 40 per cent for each of the two corners. There were various sales throughout this district which applied to this as well as the 19th and 20th Street properties and also to the 11th, 12th and 13th. This is a gas district and it has been my experience that the land sur- [fol. 881] rounding a gas company is selling at lower rates than the corresponding section further south or north. The company owns a great deal of property in that section and it is very hard to get actual sales that are directly opposite a piece of property such as that. On the north side, you have the Willard Parker hospital, which cannot be bought or sold, and on the south side the land is owned by the Consolidated. The property belonging to the gas sold changed hands and sold higher than my units on these pieces. That, however, is a little piece by itself and no criterion except by comparison with the other pieces in other places, and if that was a vacant piece of property, I am quite convinced that for garage sites that would sell for the figure I have put upon it. The Edison Company bought the property, which is directly opposite this property. On the Block running west of Avenue C and between 15th and 16th Street, there are tenements, stables and garages there, with little manufacturing, such as cabinet makers, pain- shops, or ironmongers.

Two six-story buildings (tenements). 518 to 524 East 16th Street were sold in March 1923 for $77,000. The plots were 75 by 100. 533-543 East 15th Street was a plot 125 feet by half the block, containing six five-story tenements, which sold for $90,140 and was assessed for $70,000, and which was accumulated by the Kashmir Construction Company. In my opinion, the land involved in that sale was [fol. 882] worth about $8,000 a lot. If you are going to give any value to those buildings, that land is not worth over $8,000, but if you tear down those buildings and treat the plot as all land values, you get five lots for $90,000. I did not regard the buildings as adding anything to the value of the land for his purposes, as they were to be torn down and some sort of a garage or manufacturing building put up there. I consider that the two six-story tenements at 518-524 East 16th Street added value to the land.

The property which was there before the Willard Parker Hospital was built belonged to the gas company, and was taken in condemnation for the Willard Parker Hospital. I did not testify in that proceeding. An addition was made to the hospital in 1911 or 1912 and a new building has been built right between 15th and 16th Streets, which I do not believe is over five years old.

The assessed valuation on Lot 1, Block 989 for 1923 was $169,000. I do not know it for 1922 and 1924.

[fol. 883] April 8, 1924.

Met pursuant to adjournment.

FRANCIS K. STEVENS, a witness in behalf of the plaintiff resumed the stand.

Cross-examination by Mr. Donnelly:

Referring to sheet No. 4 of Plaintiff's Exhibit No. 258 and to Block 870 shown on that sheet, I gave no separate valuation to Lot No. 47. I treated it all as one parcel. Lot 47 is not vacant; there is a two-story building I think standing on the easterly end of the plot. Whether it covers just Lot 47 I am not sure. I arrived at the valuation of the two lots 47 and 60 by using a unit of $50,000 on Irving Place and $30,000 on 15th Street. That is the office build-

ing. For the corner at 15th Street and Irving place I added 10 per cent for the key lot and 50 per cent for the corner. I found the assessed valuation of the land for 1923 of those two lots to be $431,000. I do not remember that I examined the assessed valuation for 1922 or 1924. I took only 1923. I found that the assessment of $431,000 was for the two lots taken together. They had not been assessed separately, that I remember. I have no definite recollection on the subject. Looking up the assessments of that sort I treated the lot as a whole and I treated the assessments as a whole; and if they had been separated I would have added them together and made a total. I think possibly that they were assessed separately, because they have two lot numbers, but the total assessment on the land, [fol. 884] of that entire plot, is $431,000. I looked them up in our books and put them down, and if I thought it was of any importance I would have made a note in my mind. What frontage Lot 47 has on 15th Street I did not even consider. It is 22 feet 6 inches running back 84 feet and the same width in the rear.

There have been no sales recently in that location that are comparable with this plot. The properties were collected for large buildings in this section in 1908, and 1909 and 1912 the Borgfeldt Building and the Nemo Building, and since then there have been practically no large constructions on Irving Place. There have been a good many sales on Union Square; we sold the West Moreland in a large plot, 80 odd feet by 150. I took these sales into consideration in arriving at my valuation, only to show the trend of business and what was going on in that location.

I have had a good deal to do with the Borgfeldt Building, at the northwest corner of 16th Street and Irving Place. I have appraised the Nemo Building also; that is on the southwest corner of 16th Street and Irving Place. Those are all large buildings and were constructed, as I say—the plots were collected, I think in 1908 or 1909, and the buildings were completed by 1910. I think the Nemo was a little later. That might have been 1911 or 1912. The Borgfeldt Building was leased in 1912 or 1913, on a net rental of $100,000 net per year. We did not make that lease. I appraised the building within the last three years.

I appraised the land and the building both. I do not remember exactly what value I gave the land but my units on that were $45,000, for a lot 25 by 100 on Irving Place, [fol. 885] and I think I used the same unit on East 16th Street as I did on Irving Place. I have forgotten what I appraised the building at. I have not got my figures with me. It was an eleven story loft building of good construction.

In my appraisal of the Borgfeldt Building, I was not compelled to make an appraisal of the building in order to get the value of the land. There is no vacant land in the vicinity of this office building on Lot 60, that I know of. On 13th Street I think there is one vacant plot. The Tammany Hall was in the market, or was supposed to be in the market, last spring. We made an offer on it at that time. It is a pretty old building and I know what my opinion of it is—what it adds to the value of the land. I think there is a vacant lot in that vicinity. I think a building was pulled down. I do not know whether they have rebuilt on there or not, but there was a vacant plot on the north side of 13th Street. That American Express Company Building, that is practically vacant land in the rear there. On the north side of 13th Street, between Fourth Avenue and Third Avenue that is relatively the same. The Gas Company is between Irving Place and Third Avenue. As a matter of fact they put up the American Railway Express station, sort of a freight and receiving station on it now. About two years ago or three years ago, that was vacant. At the time it was vacant it was not used for any purpose. That building was only put up last year; just a year ago, 1923. It is 150 feet front and 125 feet. I suppose it would be irregular there. It would be 125 on one side and 140 on the other side.

I have had no sales of vacant land in the vicinity of this [fol. 886] lot 60 and this lot 47; there have been very few sales in there. I have made no sales in the vicinity of Lots 60 and 47 and of improved property, where the improvements were removed after the sale. The nearest sale that we made was the Westmoreland Hotel Building. That has not been pulled down as yet. That is at the southeast corner of 17th Street and Union Square. I made that sale

about a year ago. I did not make the negotiations. I was consulted about the price at which the Astors should sell the property and they sold it at my price. The plot was 85 feet by approximately 125. At that place it is a seven story old apartment house. I guess its construction goes back to 1880 or 1886. Since the sale the old hotel has changed hands twice. Lowrie bought it first and then he sold it, and then they resold it again. So there have been three sales on that. It is occupied and used. Some of the leases do not expire in there until this May. I have made the appraisal. I have known the building. One time it was under our management. The Astors owned it and they sold it. I made the appraisal for the purpose of the sale. The price that it was sold at was $300,000. It may have been three hundred and a quarter. It is three hundred and a quarter. Most of it was for land because that building did not make a good return. It just about carried itself. That was one of the reasons why the Astors sold it. In arriving at my valuation of the land, I considered that the building added to the value of the land, very little. I do not remember the exact figure I allowed for the building, but I suppose if I had been forced to divide it I would have [fol. 887] divided it and given the building a year's rental. That was not one of the sales that I took into consideration in arriving at a valuation here. It just shows familiarity with the section and, as I stated before, there were no sales that you could compare in the last three or four years in this section with that piece there. Now, there is a plot that might be compared but they bought that in 1908, and that is a long time ago, and a good deal of water has flowed under the bridge since then. I am indicating the northwest corner of Irving Place.

The southeast corner, the purchase of the plot for the Nemo Building, is a comparable sale; but that took place in 1908. That is pretty far back to give any basis for anything decisive with the values as of June 1, 1923. From my experience I think it furnishes a check on the values as of June 1, 1923, because what they paid in 1908—how has the section moved since then, and my knowledge of that; the knowledge of the rentals and those conditions in that general neighborhood enable me to arrive at the conclusion

which is satisfactory to myself. The plot on which the Nemo Building stands is more than 160 feet. It is about 150 feet on Irving Place and ran back 100 feet. The Nemo Building is a 12 story fireproof loft building of modern construction with elevators, fireproof, sprinkler, and all the last things in it. It was erected in 1912 for a loft building, proper toilets, staircases of the proper width, and all those things. When I looked at it I considered it complete, in all ways complying with the Fire Department Laws and the Building Laws. I valued that building and the land. [fol. 888] I do not remember what value I gave to the land. I do not even remember at what figure I valued the land. I didn't bring that sale here with me because that is my own information and the units were the only things that were interesting to me. I used the unit of $45,000 in there at the time I made the appraisal. That appraisal was made, I think, about a year and a half ago or possibly two years ago, and the unit that I used on that land is the only thing that interested me. What I put on the land and what I put on the building did not interest me a bit.

My method of appraising the land and improved properties is that I put the value on the entire property, what I think the land is worth, and the building represents the difference between the land and the total. It may be its constructional cost, it might be more and might be less; but it represents in my opinion the difference between what the whole would sell for and what the land is worth. That is my opinion of the building value. It is not structural value and has nothing to do with structural value at all. It is only the difference between the land value and what the whole would sell for. I am not a builder and have not qualified as a builder.

I have appraised a great many buildings as a real estate appraiser. Immediately south of this office building on Lots 16 and 47, Block 870, is the Academy of Music, and [fol. 889] across the way is a theatre on Irving Place. In the rear, on 14th Street is Tammany Hall, and the general character of that location is business with some old buildings used for dwelling purposes that have sort of been left in the movement towards business. The most use of that section is business. On the south side of 15th Street,

between Third Avenue and Irving Place we have this big office building. On the north side is a dwelling and I think the Prison Association has a building in there. On the north side of 15th Street and the rest of the block is dwellings. I should say they were boarding houses and dwellings. They are comparatively old buildings; left overs from the old residential section. The office building does not take up the entire block between Third Avenue and Irving Place; it stops about 100 feet from Third Avenue. That fronts on Third Avenue and that has Third Avenue stores and dwellings up above. I gave the unit of $30,000 a lot, for the property from Irving Place down to the end of the plot. My units from there on to Third Avenue would be Third Avenue units. Just offhand I would say the units I would give on Third Avenue would probably be $35,000. There are recent sales on Third Avenue which would act as a guide to enable me to arrive at my valuation of Lots 60 and 47. There was one in December of last year. I did not take it into consideration at all, because [fol. 890] what Third Avenue is has no effect on me as to its value. If there were any sales on Third Avenue between East 14th and East 15th it would not have served as a guide for the valuation I have given of lots 60 and 47. The Academy of Music is on the east side and then comes the Gas Company's building, so that that occupies the entire block from 14th to 15th on the east side. On the west there is an old building, facing on 14th Street, and there is one little entrance between it and the Irving Place Theatre. They are all old buildings, I would consider, on the west side of Irving Place.

Referring to sheet No. 5, of Plaintiff's Exhibit No. 258 and to Block 985, Lots 7, 19 and 20, all of this general neighborhood, from practically 13th to 22nd Street is more or less used by the gas properties. That is not continuous—there is a break in there—but relative sales in there that effect one piece more or less affect the others. The gas company has, in a way, depreciated that entire neighborhood, in my opinion, and therefore it does not make very much difference on the side streets—the units in there—between Avenue D and C and B, which is used for the gas purposes. I used here a unit of $7,000 on 17th Street and

$7,500 on 18th Street at that point. I valued the lots as a whole, that is to say, I did not give any separate value for each of the lots. There are no corners on that piece. On 17th Street, between Avenue C and B, there are dwellings, [fol. 891] some commercial garages. There is a bakery facing on 17th Street and running through to 16th. They are all, I would say, old fashioned five story tenements, with the exception of 616-618, which are newer construction. Those are all old time, without shafts. I do not think there are any new garages built on East 17th Street recently. Everything on 17th Street is of small dimensions. There are good tenements along Avenue B; they are what we call new-law tenements, fireproofed to the first floor. Right next to it is a furniture and wood turning factory. There is a three story building on it west of Lot 7 on 17th Street there is an old three story factory marked "Furniture and wood working risk" runs right through from 17th Street to 18th Street and then come the lots facing on Avenue B. I would not swear to the use of it, because I have not been in it. Between the easterly end of Lot 20 and running over to Avenue C on 17th Street there are some old tenements that were acquired and used for some manufacturing plant, marked "Cigar box manufacturing plant." As to the vacant spaces on 18th Street in that block, there is a lumber storage, I think, which is right next to the gas company's, and I think the gas company owns those lots. On the lumber storage plot there was at one time used—there is a new garage on 18th Street, and that was the lumber company, and they used that and the gas company's lots I think, in conjunction. That was in 1919-20. Since then there has been a garage put up on that plot. At 644 and 646 east 18th street a new garage has been put up within the last five years, and at 648 and 650 east 18th street—no, that was a [fol. 892] three story building there. That brings you right up to the Avenue C frontage and all the buildings on Avenue C are dwellings. I do not know what the gas company manufactures on this block between Avenue C and D. It owns the properties there and there are some old frame sheds on it. I valued the land and I should think there is any manufacturing plant on that land.

The ownership by the gas company there depreciates the surrounding property. I do not think that I would care to

live next to a gas plant. I think, for business, garages—they can, in there—garages have gone in there and bought; and manufacturing and machine shops. They all go where the land is cheapest. Manufacturing establishments go where the land is cheapest. There have been recent sales in the vicinity of these three lots which I valued, and took as a guide or check in making up my valuation. There is vacant land there; what I call vacant land is right up on 23rd Street. Not on the two blocks north and south of it. There are some 50 foot yards on the north side of 18th Street and a 50 foot yard on the south side at 19th Street. All that land is being used in there. Sometimes they used the vacant land for storage and sometimes for manufacturing and iron foundries. The vacant land is devoted mostly [fol. 893] to storage. I do not think there is very much difference between the values of that general section for manufacturing purposes. I would take the vicinity from Avenue A and 23rd Street down to 16th and 17th Street and down to 14th Street. The corner of 14th Street and Avenue A, of course, is not comparable to this section. In that area, recent sales, if there had been any, would serve as a guide to me in making up my valuation on these three lots. I took into consideration what the New Amsterdam Company sold their property for, which was 16th Street between Avenue A and B. I did not conduct that sale.

As to the New Amsterdam Company property, they sold a plot from 513 to 529 East 18th Street in 1923. That is Block 976. I do not know the lots, offhand. I have given you the numbers of the streets. The title passed in July 1923. The size of the plot was 156 feet on 18th Street and ran through the block and included the plots on the south side of 19th Street, between Avenue A and Avenue B. It ran through to 526-536 East 19th Street. It had about 77 feet on 19th Street and 156 feet on 18th Street. It runs back half the block. That is a little irregular in the rear there, because there was an old holder that once stood on that property. I do not know the exact dimensions of it. That was a sale by the Standard Gas Light Company in July [fol. 894] 1923 to the Howes Transportation Company. I did not conduct the sale but I knew about it. No buildings on the property at the time of the sale; it was all vacant

property except there were one story brick buildings on that; very old buildings. The plot has been improved since the time of the transfer; those were all improved since the sale in July 1923. The improvements on the property now are one-story ice service plants; brick buildings. I got the information in the deed and from the books, and then I made the inquiry, personally; either from the Standard Gas, Mr. Alrich, or Mr. Thomas—one of those three—for my information as to the value—as to what it sold for. It was sold for $115,000 and owing to the bond issue covering that property they had to enter into a lease until the bonds become due and are paid off. The purchasers and the gas company entered into a lease. It was all leased to 1930 at, I think, $6,900 a year. That is a matter of record in the Register's office. It is an actual sale. The bonds and the numbers there—I gave you the wrong numbers. The numbers are 531 to 539 East 18th Street instead of 513 to 529 East 18th Street, the numbers I gave first, and 528 and 530 East 19th Street. The dimensions are the same. 156; that is why I could not get it straight; 156 feet on 18th Street, and runs through to 19th Street, and has a frontage there, the same frontage on 19th Street, 156 feet on 19th Street. It runs right straight through the block, that plot, [fol. 895] 156 feet on each street. Now, there were practically no buildings on that property. There was a one story frame building and it was practically vacant land. Referring to my former testimony that it is being improved by the erection of an ice service station; it is the Howes Transportation and Construction Company, and they have rebuilt—pulled down all the old buildings on that plot and rebuilt—with a one-story building running through from street to street. The Howes Transportation Company went in and bought that property and part of that plot is still vacant. They have kept it vacant—for storage, I suppose. The Howes Transportation Company transaction is a sale for $115,000, but owing to the fact that they cannot take title or cannot give title to the property until the bonds become due, because there is a bond issue covering the real estate of that company, the purchasers agreed to lease the property until those bonds are paid off. That is contained in an agreement to purchase it at $115,000, as soon as the bonds are paid off, either before or at 1930, when they

become due. In other words, if conditions do not permit the taking of title, then the lease will go on at least until 1930.

The other sale in that neighborhood that I took as a guide or a check in arriving at the valuations that I have given for lots 17, 19 and 20 was 525 to 531 East 15th Street. That is between Avenue A and Avenue B on the north side of 15th Street. I did not conduct that sale. These are all record sales, and they represent transactions in the neighborhood. That was in November 1921. I regarded a sale [fol. 896] in November 1921, as giving me a guide to valuations as of June 1, 1923. They are all helps. That plot 525 to 531 East 15th Street has a frontage of 99 feet 4 inches by a depth of 103 feet 3 inches. It was sold, East Side Stabling & Storage Company to Sidney & Morris Reiss, in November 1921. At that time it had on it a five story fire proof garage of recent construction. The garage is still there. He bought the entire property. All these sales I picked them out, the large plots of 50,100 feet or more in size. No one sale is a criterion, but the general sales in that neighborhood. I did not make any inquiries independent of what the record told. The Record gives the mortgage and the stamps. Revenue stamps are indicative of the real consideration. They are not infallible by any means, but they are a guide. In other words, the property would not have sold for more than what the revenue stamps show. I would not take them as infallible, but where they generally bear out the prices in the general neighborhood, I take them as a criterion, not as an influence. The record shows with reference to the consideration, that the property sold for $127,500, the total assessment is $98,000.

The sale that I consider had more weight than any was the sale of the Standard Gas Company's property. That was a perfectly open sale to an outside buyer, and that is, I think, as good a criterion as you could get. These other sales, some of them are high and show very much higher land value in my mind than the actual units that I have [fol. 897] used in this appraisal. Other sales are 533 to 543 East 15th Street, I testified to 529 to 531, now, 533 to 543 East 15th Street. They are six five story tenements on a plot, 125 by 123. They were old tenements. Thomas F. Mulry and others to the Kashmir Construction Company.

That sale took place in July 1923. I got my information as to the transaction from the Record and Guide. I did not make any investigation or inquiry independent of what the Record and Guide showed on that piece. That states with reference to the consideration $90,140, assessed at $70,000. The Standard Gas Company's property was assessed as land unimproved $100,000. It sold for $115,000. Now, using my units of valuation that I used at this point, of $8,000 or $7,500 as I used in the 18th Street plot, would be 12 lots and a half at $8,000 a lot. That would be $100,000. For the Standard property, 15 per cent size makes it $115,000, the exact price for which it sold. You take in these other sales, which included land and building, the city assessed the 525-531 East 15th Street, land $35,000 buildings $63,000, total $98,000. It sold for $127,500. That would be four units, 99 by 103 feet. My valuation would be four times eight would be 32, and size—$37,000—15 per cent size would be $4,532, would be practically $37,000. I do not know what I would put on that building. I would have to figure it out. If you take the city's assessment of $63,000 from $127,000 it would leave you $60,000 valuation for the land. For buildings, I am taking the city's assessment of building from the sale price and that leaves you $60,000 for the four lots, or $15,000 a lot. If I was going to analyze [fol. 898] that sale, I would put my own figure on that garage. I didn't analyze it, for the simple reason that I analyzed it only as a criterion that it is well above the city's assessments.

The third one was 533 to 543 East 15th Street, 125 by 103, six five story tenements, sold for $90,140. It was assessed at $70,000. The land was assessed at $41,000; the buildings at $29,000. My value on that land would be five times $8,000 is 40,000—$47,000 subtracted from $90,000 would leave $42,000. Now, the City assessed those six tenements at only $29,000. I am convinced from my own knowledge of the location that I would not put $42,000 on those six tenements. Therefore, I know that my land unimproved unit is lower than that sale would indicate, from my own opinion; lower than any deduction that I could make. I passed right over that. Deducting my land value from the total would leave a value of $42,000 for the buildings. I do not think [fol. 899] that they begin to add that value to the land.

Old tenements in that section; therefore, my land units in that section are conservative. As soon as I know that they are conservative, and they are not too high, I am perfectly satisfied. The sale would indicate that my land value was too low because of the inadequate character of the improvement on the land.

There were a whole lot of recent sales in that vicinity that I took into consideration in arriving at my land unimproved values there. There was a trustee's sale, 407 to 415 East 18th Street, and the Bank of New York and Trust Company, as Trustee, sold to the Prudential Condensed Milk Company, 107 feet by 92; they sold that for all cash, for $42,000 in November 1922; that would be between First Avenue and Avenue A. There were some old buildings on that property which have been pulled down and the Milk Company have put up a new building, fireproof to the second floor. It is a three story building. They bought it for land value only. That would show a unit in there of four times eight is thirty two, and seven feet, we will say that is—call it $4,000; thirty two, thirty six and size brings it out to $42,000 very close. That is taking the $8,000 unit. They tore down the buildings and put up a fireproof building. That was the stated consideration in the deed. The New York Bank and Trust Company acting as Trustee, in the Record and Guide and the deed so states. I do not get at it by a computation of revenue stamps; it was all cash. I did make inquiries outside of what the record told me that [fol. 900] that sale was checked up in my office by communication with the bank. When pieces of property are sold, as soon as we get wind that a piece of property is sold we generally try and get in touch with the purchaser or the seller, or somebody connected with the sale, and they in most cases are very willing to give us the information. I get into verbal communication with them and sometimes I see the contracts, they show in the contracts. In reference to this particular transaction, $42,000 represents the land value alone. In other words, that the building did not add anything to the value of the land at all or did not furnish any part of the consideration for the purchase, they pulled it down. I have given a unit of $7,000 a lot on 17th street and on 18th Street a unit of $7,500 because 18th Street runs right out to Marginal Street, and is right next

door to, or this is the first block from Marginal Street. 17th Street is a little further away and ends down here in the Park. I just felt that 18th Street was a little bit better than 17th Street. I would rather have property on 18th Street than I would on 17th Street. It runs out into Marginal Street and Marginal Street ends at 18th Street at that point. At the foot of 17th Street there is no dock. The park is opposite; and you practically run into the Willard Parker Hospital land, I think, in there, or City-owned land. The hospital is 16th Street. It runs up to 17th Street. That is blanked off there. To the north side of 17th Street, you have coal bunkers on that land there. The means of access to the Marginal Street from 17th Street and Avenue C would be to drive down 17th Street and then up Avenue C [fol. 901] to the Marginal Street, a short block. Marginal Street a traveled street there, it begins at 18th Street and is a very much traveled Street. It is a very broad street. It is part wharf. I mean it is over a hundred feet wide. East of 17th Street you have a park in there, between there and the river. In valuing lots 7, 19 and 20, I gave an allowance of 15 per cent for plottage because I find that that mathematically compares my values very favorably with all the sales that I have used. In all cases that I have so testified I have added 15 per cent plottage, even on small plots 100 by 100.

We have opened up a pretty hard situation if I have to go into an explanation of plottage. I think it is a well known fact that two lots, the ownership of two lots, is worth more than the ownership of one. That plottage and that element of plottage varies in my opinion all over the City of New York. In some retail streets the element of plottage is not great, because the property is so high. I mean the store value is so high that a large store cannot rent on the same basis as several smaller stores. In factory and big mnaufacturing locations the element of plottage is very great. There are lots of plants that could not get along with 100 by 100. They would have to have a block or more than one block. The Pennsylvania Railroad, the plottage on that, Altman, The National Biscuit Company, the Gas Company, the Electric Company, The Hudson Terminal, Eagle Pencil Company, all had to have either one block or a combination of blocks. The plottage, to ac-

quire that property and to use that property, is very valuable to them, and I thought that in this location 15 [fol. 902] per cent, on a plot of that size, where using my units in comparison with the sales of 100 foot plots justified 15 per cent plottage, the use of 15 per cent plottage on this block was very moderate. All of those considerations that I have just enumerated enter into my experience, and just what my experience is, or how much they add to my experience, each case, I could not say.

In valuing lots 7, 19, and 20 the only question in my mind was, should I take into consideration that the Gas Company, the ownership by the Gas Company of so large an amount of land in that general section, depreciated not only the surrounding land, but in consequence should I use a higher land value based on land values way away from that in a similar location, outside the influence of gas, and that I discarded and decided I would be guided in my valuations by what land was selling for in that immediate section with a gas plant in that location. In valuing these three lots 7, 19 and 20, I gave the use of the property no consideration at all. In making up my valuations I disregarded the use to which the property is devoted; that is my testimony. The use to which property is devoted is not one of the elements in determining the valuation to be placed upon it, as I was instructed to appraise this property. In my general experience as a real estate appraiser, the use to which property is devoted, is not a very important element in arriving at its value.

[fol. 903] I was told to put the fair market value for a piece of vacant property situated in that location.

I think they might have asked me to give the acquiring value, which value I put on in the case of the New York Railways Company. In determining the fair market value of property, the use to which the property is devoted is not a very important element in arriving at an estimate of its value because I am supposed to put on what it is going to be sold for; and what the purchaser is going to use it for I do not know—the effect upon the purchaser. The purpose for which the property may be used is one of the elements to be considered in arriving at the value of property. I considered that that property could be used for a large manufacturing plant, commercial garages and such

use as that, I would not put a small garage on that great plot and I could get a garage on that plot, large enough to accommodate more than 500 automobiles. The purchaser can do anything he wants after he purchases the land. The five-story garage in connection with one of these sales is what that purchaser desided was the best improvement for his land.

In arriving at my land unimproved values of lots 7, 19 and 20 I considered and discarded all small sales of a single lot 25 by 100, as furnishing no guide because we are dealing now with plots of large size and I am frank to state [fol. 904] that I think that the justification for my figures is in the sale of the Standard Gas Company's property. I thought that sale at $115,000 was a very good criterion even though the purchase may not become effective until 1930. The sale was actually consummated in my opinion the day the lease was signed. Speaking of that Standard Gas Light Company sale, I don't know if there is any relation between the actual amount of $6,900 and the purchase price of $115,000. The rental of $6,900 a year is exactly six per cent of $115,000. That is a fair percentage at which a lease of vacant property in that locality should be capitalized. It will remain at six per cent until the end of the lease. Six per cent has been the figure at which a lease of that character would be capitalized, ever since the Armistic. Before that it was about five per cent. I have dealt with lease on that basis a great many times.

I found the assessed value on Lots 7, 19 and 20 for 1923 to be $209,000. I don't remember whether I found the same assessed valuation for 1924. It would not refresh my recollection but I would take the statement as being true, if I were told the assessed valuation for 1924 on those three lots aggregated $217,500. I do not know what I found the assessed valuations for the three lots separately to be. I have not got that. I must have had it at one time, but those records are over in my office. If assessed at $217,500 for 1924, they have gone above my valuation as of June 1, 1923.

Speaking of all of my valuations, all those figures are as of June 1, 1923. Those parcels, so far as the values are concerned have probably increased in value in some cases, but in the majority of cases I should not think that there was [fol. 905] very much, since June 1, 1923. I am not prepared

to say in what instances the increase has taken place, without much more careful study of transactions that have gone on since June, but I would think that this general neighborhood has increased in value—that is, between 13th Street and 23rd Street. It is filling up. Every sale of property takes so much land out of the market. That is a section that is in more or less demand for manufacturing or business requiring considerable parcels. The plottage seems to be in great demand. Now, the Edison Company have bought that property on 14th Street and also on the south side of 14th Street from 13th to 14th. That knocked McKain, the lumber man, out os his possession and location, and he is looking around, and we have been trying to locate him. There does not seem to be any let up in the demand for commercial garages. That surprises me. We cannot seem to get them enough property. Off hand I would say that my inclination would be to raise my figures slightly. I cannot say much. I did not turn in my figures until November 1923, but I am governed by the information and the units that I used before June 1, 1923. If there had been any increase up to the time I submitted my figures in November, 1923, I would not have given the plaintiff the benefit of the increase, according to the way I appraised it. I think there has been a decided increase in values in the last eight months, generally. That is not a constantly rising tendency. Last spring was very active in the real estate market. Then there was a falling off, of marking [fol. 906] time, until we found out what the summer was going to develop in the money market. People were waiting to see what the situation was going to be. Nothing happened during the summer, and then confidence was strong and they jumped in and there was a tremendous real estate market during last autumn. As I say, in the last eight months, the last 111 sales of our property amounted to seventeen and a half million dollars, which is a very large amount. I found the demand all over the city, for everything very great in the last eight months. I did not find any decrease since June 1, 1923, in any of these properties. Some of these properties that I have appraised also include properties in the Borough of the Bronx. I found no decrease there since June 1, 1923. I would not de-

crease or increase any values in that section. In making up my values I have not taken into consideration the increases in these values since June 1, 1923. The Standard sale did not in my opinion, represent an increase in real estate values in that section nor did it show a decrease in real estate values. It backed up my figures. Those units I have put in these properties are units that I have used for this appraisal We make apparisals all over this section at all times, and a great many appraisals. I would use, in picking out any one date in the past, I would go back to my files and take the unit that I used in those years representing at that time in my mind what I thought of property in that section at that time. [fol. 907] Now subsequently, the property may have gone up or may have gone down, but I would take the judgment I formed at or about that time as much more conclusive than my feeling today. The lease was signed and the transaction closed in July 1923. The negotiations, however, started before that, and naturally I tried to get all the information I possibly could. I think that a month later, or a transaction a month later than the actual time, is justifiable to use in checking up your values. That transaction was consummated in July 1923, and I took it as an element in checking up in my values as of June 1, 1923.

Referring to Sheet No. 6, of Plaintiff's Exhibit 258 Block 951, Lot 35, the East 21st Street station, I have given a valuation for that of $65,000. Lot 35 has a frontage on 20th Street of 176 feet beginning about 94 feet from the corner of Avenue A. I reached my valuation of $65,000 for that lot by using a unit there of $8,000, or $320 a front foot, and there were 176 feet, which equals $56,320. I gave 15 per cent for size at that point, and that made $64,678, making a total of $65,000. The property was assessed according to my best knowledge, for the year 1923 at $53,000. I do not know the figures for the assessment for 1924.

To determine the adding of some percentage for plottage, the size of a plot depends entirely on the appraisal. It is my opinion that that size plot, situated where it was, could readily be sold for $65,000. I thought it was entitled to 15 per cent plottage. Size is an addition for the appraisal of a plot larger than one lot. If you have a plot containing two or more lots, then there should be an added amount for size.

[fol. 908] On the north side of 19th Street, directly in the rear of this property, there is a vacant plot, approximately 100 by 100. I do not know what is on that. All my testimony as to sales on the other pieces hold good for this—the same information. In giving the sales, in explaining the guides which I took into consideration, in valuing Lots 7, 19 and 20, where I took the neighborhood running from 13th to 23rd Streets, and gave certain sales, these sales apply to all the property in general, including Block 951, Lot 35, and Blocks 952, 953, 978, 979 and 987 shown on Sheet No. 6. My unit on 20th Street here is $8,000. I wouldn't take off anything by reason of the fact that a lot is shallow because those lots in my opinion will sell for $8,000. I base that opinion upon these sales in that neighborhood from 13th to 23rd Street; most of those sales I mentioned were short plottages. The short plottages begin at 17th and 18th Streets; north of 16th Street the plots become 184 feet. On this sheet here (indicating) the plots are 184 feet, north of 16th Street, up to 21st Street.

I used a unit on 20th Street and 21st Street of $8,000 each. On 22nd Street between Avenue — and First Avenue is $8,000, too. The same allowance for size on all of these lots. I have treated them all the same; as to the character of the neighborhood, of course the Consolidated Gas Company are occupying that particular property from Avenue A over to First Avenue until you get to First Avenue, and there you get into poor, old tenements facing on First Avenue. The west side of First Avenue is better than the east side. The [fol. 909] Consolidated Gas Company occupy almost the whole of that neighborhood but the surrounding land not occupied by them is used for business.

On Block 951, there is a business building, at No. 414-416, and then the rest of the block is practically all old tenements until you get to No. 404. No. 404 is a business building. There is not much activity there in that block.

On Block 978, you get into business. There is a great deal more business opposite those. Almost the entire frontage on the south side of 20th Street in Block 977 is manufacturing—storage, garages, a roofing company in there. The Department of Correction has a stable in there and there are steam laundries.

Referring to Block 952, Lots 7, 29, 30 and 35, and where

I have given a total valuation for these lots of $396,000, I valued them all as one plot. They are all under one ownership, except the First Avenue frontage, and those two lots. I didn't value them separately because they are under one ownership. If they were individual ownerships, I would value them differently, possibly give them a lesser value. It depends on how you divide it up. I used, as a matter of fact, a $12,000 unit on Avenue A. You have an 80 foot frontage there, on Avenue A, and a 65 foot frontage. Lots 29 and 30 together represents an 80 foot frontage and then you have a 65 foot frontage for the corner of 20th Street and first Avenue. I gave 40 per cent for each of the corners, [fol. 910] Avenue A and 20th Street; 40 per cent for the corner and for the lot shown as Lot 35.

Lot 1 of Block 953, I treated as all one plot. I gave you the figures on 21st Street and 22nd Street. I used a unit on First Avenue of $12,500 and on Avenue A of $12,000 and I gave the First Avenue corners 50 per cent and the Avenue A corners 40 per cent. The difference between the two is because at First Avenue you touch retail property at Avenue A, you are still in what I call the manufacturing land, and I do not think a corner there pays more than 40 per cent.

I found the assessed valuation for 1923 of Block 952, Lots 7, 29, 30 and 35 to be $370,500. I don't remember whether I found it the same figure for 1924. I haven't got any data here of the 1924. I am speaking of the land alone. I believe those lots were assessed separately. I have not given the individual assessments on each of the lots here. I found the assessed valuation of land alone in Block 953, Lot 1, for 1923 to be $550,000. My valuation there is $552,000.

Referring to Sheet 6 of Plaintiff's Exhibit No. 258, in making up my valuation of lots 5 and 6 on Block 978, I used a unit on Avenue A of $12,000; on 20th Street of $8,000; and on 21st Street of $8,000. I added 40 per cent for each of the three corners on Avenue — and Avenue B. I did not use any unit on Avenue B. I carried my $8,000 through on 20th and 21st Streets. Avenue B there, in my opinion, really had no value of its own. It stops at the next street, and in 1919 and 1920, it was closed off and has just been recently opened and paved there. There was no

[fol. 911] way of establishing a unit there and I thought that it was better to carry it along as part of the street units. My units for the two corners on Avenue A and B, were 40 per cent. In view of the fact there were no units that I could give to Avenue B I don't think it should have been a little bit less for the corners there on that avenue. Avenue B has a value below there which I could have carried out here, probably of ten or eleven thousand dollars per unit, and I felt that in lieu of the fact that I did not give any Avenue B value, that it was fair to give the full value on 40 per cent. Avenue B is an Avenue. It gives them just as much light, air and access as Avenue A, and I think it is entitled to it. The width of Avenue B between 20th and 21st strets was 60 feet. The width of Avenue A between the same streets was 80 feet. I regard Avenue A as a better street than Avenue B but if you carry your Avenue B units that are established down below through this property, you would be using $2,000 probably a lot at the very lowest more than the unit I have used, and that would more than cover the question of whether you ought to give them 35 or 40 per cent for the corner. There has always been a question in my mind as to the practical use of Avenue B. The Government closed it off during the war and fenced it off. It is a travel street now but it has only been so within about the last six or eight months that it was completed. It is asphalted. That asphalt pavement is a recent improvement. Avenue A, a paved street, has been opened and used for years. It is Belgian Block pavement. [fol. 912] Speaking of Avenue B I would use down below $11,000 at least. I have established units there and used them in the blocks south at 14th and 15th Street—I don't think I have established any units on Avenue B, so far. I have not established any units on Avenue B down to 14th Street in this appraisal. We have not been called on to place an Avenue B unit but the city assessor used a unit of $8,500, their front foot value or unit value on Avenue B between 20th and 21st Streets, and they use the same units on the east side all the way down to 17th Street. The book that is used by the deputy assessors in arriving at the assessed valuations is known as the Tentative Land Value Map of the City of New York and they are the front foot values as placed by the City Assessors. That gives the

front foot values arrived at by the assessors that are supposed to be the basis of their assessments throughout the different frontages on the streets and avenues throughout the Greater City of New York. In fixing the assessed valuations on real estate on land unimproved, $8,500 is the unit established by the City on Avenue B. These do not agree with my units on that street. As a matter of fact, I have used in my appraisal $8,000 a lot unit. I a ma bit lower than the City on Avenue B. I happened to be in this appraisal, because I carried my value along the streets. If I gave Avenue B a unit value, I suppose my unit value would be there $10,000 probably—$9,000 or $10,000. I base that $9,000 or $10,000 on my experience only with no recent sales to guide me, only on Avenue B further down. There are sales on Avenue B further down beside those mentioned. [fol. 913] There are sales in all this section, a lot of sales in this section that I have not mentioned. When I testified this morning I gave only those sales which I regarded as factors or elements enabling me to arrive at my valuations here. I disregarded lots 25 by 100. I added 15 per cent for plottage on this Lot 978, and that was because of the fact that the two lots, 5 *au* and 6 were under one ownership and constituted almost an entire block. I assumed in giving my 15 per cent additional for plottage that the plaintiff did not own the entire block. I did not include the southeast corner of this block. I call it the northeast corner of Avenue A and 20th Street, Lots 1, 2, 3 and 4. I know that plaintiff does own them, but I did not consider it in arriving at my total valuation. I only appraised the part marked in blue. I assumed that Lots 1, 2, 3, and 4 were in different ownership. I found the assessed valuation of the land alone for 1923 of Block 978 to be $439,000. I have not got it for 1924. I gave that no more consideration in arriving at my valuation than in any other case. I mean I have testified already on all the other blocks how much I considered the assessed values, and I considered the assessed values in this in the same manner. I gave them the consideration that I would give any figure that is put on by another person. There were no instances here where I accepted the assessed valuations in forming my own opinion. Sometimes my figures have happened to come very close to the assessed values. I think the assessed valuations are cor-

rect in those cases. I agreed with them, where they come close to mine.

[fol. 914] As to Lots 1 and 27 of Block 979 in making up my valuation of those two lots, I used an Avenue A unit of $12,000; of 21st Street of $8,000; of 22nd Street of $8,000; and Marginal Street of $10,000. I gave them 40 per cent for each of the four corners. They owned the entire block there, and therefore they received the same 15 per cent for size.

By the Master:

In all these cases that percentage of 40 per cent. includes the key lot value. The 40 per cent does not cover two lots on the corner. I take a lot 25 by 100, an inside lot, and I add 40 per cent for its being the corner; 40 per cent of an inside lot would be $3,200, where the unit was $8,000. Therefore, I added $3,200 for a corner there. That includes my key lot. The key lot in these big plots is not of great importance. Except where I have stated specifically, I have not allowed, in addition to what I call corner lot value any additional per cent. on the adjoining lot as a key lot value.

By Mr. Donnelly:

I used a unit of $12,000 on Avenue A, and of $10,000 on Marginal Street because I think that Avenue A has a value of $12,000 for a lot there and for a lot facing on Marginal Street only $10,000. The Marginal Street itself, is I think, 100 feet, and then they have what they call a Wharf Street, which is on the outside of Marginal Street, which is 75 feet. I think the whole thing is 175 feet between the westerly side of Marginal Street and the bulkhead. In valuing the lots facing on the Marginal Street I did not assume that the owner of the lots there has the use of the bulkhead. That did not enter into my consideration. Marginal Street is [fol. 915] a public and travel street there, asphalted I think, with free passage up and down. The question of the use of the bulkhead or the waterfront did not enter into my consideration at all in arriving at my value for Lots 1 and 27, except, naturally, a block fronting on the waterfront is nearer the water front than a block away. The assessed valuation on the land there of Lots 1 and 27 for 1923 is

$477,000. I understood it applied to the two lots; to the entire block but I may be mistaken. I have not got for 1924 the assessed valuation on those two lots.

In making up my valuation of Lot 37 of Block 987 shown on this Sheet 6, I used a unit on Marginal Street of $10,000 and on 20th Street of $8,000. The frontage on 21st Street, being less than a lot in depth, naturally takes the Marginal Street value. That is an irregularly shaped block there. I figured that Marginal Street value covered $18,400 square feet at $4 a square foot, makes $73,600. That left 11,345 square feet subject to a unit of $8,000 or $3.20 a square foot, making $36,304. I gave them two corners on Marginal Street, 40 per cent each, and one corner on 20th Street, 40 per cent and gave them 10 per cent for size. The corner up at Avenue B and 21st Street I included in Marginal Street. In other words, I gave the same percentage for the two corners up at 21st Street as I did for the corner down at 20th Street and I gave that block only three corners—the value of only three corners, although it has four [fol. 916] frontages. I added 10 per cent for plottage there. You have got practically 30,000 square feet, which is 12 lots; quite a plot of land, with four frontages.

I took the value of the entire parcel first and then add something for the corner; all these divisions are mathematical divisions for a matter of comparison and checking up. If an inside lot facing on a street is worth $8,000, or an avenue is worth $12,000, we will say—in this case $10,000; 40 per cent of an inside lot is $4,000. Now I consider the corner lot is worth a certain percentage more than an inside lot. In this instance, on the Marginal Street, it is $10,000. I am using a unit of $10,000 for the inside lot 25 by 100, and 40 per cent of that would be $4,000; so the corner lot was $14,000 and the inside lot $10,000.

The 10 per cent is added to the total valuation that I have given, by reason of the fact that I add that for plottage. In other words, in checking up these values with a given sale, I decide in my own mind that the size of the plot which is sold is entitled to 10 per cent plottage. I divide the selling price, the land value of the selling price, by 110 per cent. Then that gives me the value, the total value, of the separate units, with the corners included, and then I work backwards that way. That is the mathematical way of comparing

them. I do not think I am too high in giving 10 per cent plottage on this particular plot here, as I have only given you three corners on that plot, which has four frontages. [fol. 917] You have 12 lots in there, and that is a very handsome plot. An appraiser is not bound down in my opinion by mathematical figures. I would not hesitate, if my mathematical figures worked out differently from what I thought the piece of property was worth, to either add or subtract from the mathematical values what I thought was right. That holds true of all the appraisals made by me and by my firm. All of our appraisals are the same; we use the same units throughout. In certiorari proceedings brought by persons or individuals for the purpose of reducing the assessment upon the land, I would use the same values as I do in this appraisal here. I would use precisely the same units. In certain cases I have been retained to appraise in certiorari proceedings brought to reduce assessed valuations. I use the same units there as I would here for the purposes of this rate case for the same property. If I used the same units it would not result in my getting a lower valuation than I have given here. You cannot buy my appraisals. I do not make different appraisals for different purposes.

The assessed valuation on Lot 37 for 1923 is $105,000. I do not know what it was for 1924. I gave the same consideration to that assessment as to the other assessments. That I do with all assessments. That applies to all my appraisals.

On Sheet No. 7 I appraised only Lot 23 of Block 1090. That is the only plot, 150 by 100 feet 5 inches that I appraised. Lot 23 has a frontage on West 42nd Street of 150 feet and running back 100 feet 5 inches, 100 feet from the corner of Eleventh Avenue. I used a unit on 42nd Street of [fol. 918] $20,000 in arriving at the valuation which I placed upon that plot and there are six lots there; so it is six times 20, which is $120,000. I gave them 10 per cent for size, making a total of $132,000. In that case I thought that property was worth $135,000, and I placed that value on it. There was a lease of the Eugene Higgins plot which backs up on this and has a frontage on 42nd Street and runs through to 43rd. That lease, Eugene Higgins to August Eitzen, in my opinion backed up my units of $20,000. It has

two lots on 42nd Street. It includes a 50 foot strip on which there is a garage, a two-story garage, and runs through to the south side of 43rd Street and has 13 lots on 43rd Street and 2 lots on 42nd Street. It runs right through the block, immediately adjoining Lot 23 to the west of it, with a frontage on 42nd Street of 50 feet, and approximately 13 lots on 43rd Street. When I heard that the gas company had sold the 42nd Street plot I submitted an offer through Mr. Lawrence of my firm for $135,000 for Lot 23, and the gas company turned it down. Lot 23 has not been sold. There was no property sold in that block. Block 1089 was sold. That sale would not furnish any guide in arriving at my valuation of Lot 23 unless it was the only sale in the neighborhood. It is a great big plot and therefore the size is there, working it backward from the price paid, figures out exactly on my units. It was a long lease of 30 years, the rent to be determined every ten years. I do not know how many renewals but Higgins' leases generally carry two or three renewals. They are not all averse to trying up the property [fol. 919] for a long time, about 21 years each, that was a vacant land; the lease was on land only. There were some old buildings on the property at the time of the lease that did not amount to very much. I did not negotiate that lease. That is a matter of record and is recorded. That is where I got my information as to the terms of the lease. I know Mr. Whitehead, who is in Mr. Higgins' office and has charge of it. That rental from Eugene Higgins was $11,000. The tenant, however, subleased the property at $13,000 net for the first nine years, to be five per cent of the land value but never to be less than $13,000, the renewals were to be. I do not know if the property was to be improved, but the buildings on there in my opinion do not add any value; a two story garage and some buildings in the rear. The two story garage is in active use. They are using it now. The two story garage only runs back 100 feet from 42nd Street. I won't swear to that, but I think that those buildings were practically renovated since this lease has been put on. There are some buildings in the rear, there, which have been put on, I am quite sure, since that lease went through. I have not got my data as to that. I assumed that the lease was practically a ground lease. I know the lease from Higgins was a ground lease.

The lease went through before 1920. In 42nd Street in that immediate neighborhood, Brown, the operator bought that line of tenements from the garage to the New York Railways Company. I am speaking of Block 1090 as the location of the tenements; it is a line of four story tenements; old buildings and of little or no value. He bought it [fol. 920] as a speculation and I had the price on that, and I know it backed up my value of $800 a front foot. Offhand my recollection is that he paid a thousand dollars a front foot for that plot. Brown bought that since July 1923 I think of this year; it is a recent sale. It has about 200 foot frontage there on 42nd Street. I have not the details with me. I do not think it is a sale of record as yet. I do not think the deed has passed on it. Where I got my information from as to that transaction, is confidential. I would rather not disclose them at this time. I checked it back as one of the sales as a matter of interest to see if my units were correct, and in my opinion it verified them. You do not need the details connected with that transaction in my opinion. I have stated here and I can prove that we have made an offer of $135,000 for that property and that the gas company has turned it down. I have the money to buy it and I can buy it today. I mean I will make good on that today. I did have something to do with the sale of this parcel to Brown; on the north side of 42nd Street, but the tenement house property I had nothing to do with that. I have given the size of the plot, the character of the buildings on them—old tenements but the price I cannot give now. In other words, the transaction has not been consummated by the delivery of the deed. Yes, the contract is signed. I do not remember when the title is to close but I think it still has some time to run before it closes.

There are no other sales in this neighborhood which I think would be of service in determining my valuation for [fol. 921] Lot 23. 42nd Street is a broad street there; it has cars running along it, and I think it is worth more than other side streets in that neighborhood. The New York Central freight railroad trains runs on 11th Avenue. The lot 23 is nearly or about a thousand feet, I should say from the river front.

Outside of the Brown transaction there were other sales

that I conducted in this neighborhood. We sold the 12th Avenue frontage from 44th to 45th Street. 12th Avenue is further over to the west from 11th Avenue. That is the avenue which comes next to the bulkhead. It is right opposite the docks there. We sold the northeast corner of 12th Avenue and 44th Street. I think it was approximately 125 feet on 12th Avenue. I think I have it. On account of the gore there it is a little longer. It is about 200 feet in depth. I have it here now. It is 217.74 feet on the north side of 44th Street and 125 feet on the straight-line running north of 44th Street; then continuing perpendicularly to that line out to 12th Avenue. The whole block front was acquired in the last two years. It was sold in two parcels; one parcel we sold and the other parcel was sold by somebody else. The purchase that I negotiated was not made in order to fill out and complete a plot. There are two separate owners. F. L. Smith, he has erected a large building on the plot there. Is is 8 or 10 stories; 8 stories it is.

Speaking of this plot 124 feet by 217 at the north east corner of 44th Street, that was sold in February, 1923. It was the gas company's property. We were the brokers. We represented both parties there. It was sold to F. L. [fol. 922] Smith. There was nothing on the property at the time of the sale. There may have been some old trucks standing on the property and the property was about three feet above grade, I think. Improvement have been placed upon it by Smith since the acquisition of it. A brand new building, fireproof, six or eight stories high. For his business and I think he rents out the two lofts in that building. I think we made the leases of two floors in that building. That is the F. L. Smith Contracting Company, machine and tools, not contracting. He is a manufacturer of machinery, I think. I think it is construction machinery; I think he manufactures construction machinery. The consideration there was $170,000 for the piece we sold and $100,000 for the other piece. I took part in the negotiation of the lower piece and I know what the upper piece sold for. The units work out $15,000 or using a unit of $15,000 on 12th Avenue and $12,000 on the streets, giving him two corners at 40 per cent and 15 per cent for size, would bring the total of that plot up to $262,341. The sale price was $270,000.

As a matter of fact, 42nd Street between 11th and 12th

Avenue is very poorly improved. The 11th Avenue front is improved with some stores and little old tenements three, four and five stories, high, and then comes your plot, or the plot in question, which is vacant. Then comes this line of tenements, and then comes the New York Railway's car barn property, and opposite is the property formerly owned by the Consolidated Gas Company. The F. L. Smith transaction was approximately 125 by 217. The other was the rest of the property running approximately 75 feet by 181 [fol. 923] feet on the south side of 45th Street. Twelfth Avenue runs into a gore on a slant there. They are all old improvements in 43rd Street as compared with 42nd Street. You do not really get to any new construction until you get to the plot on the north side of 43rd and 44th Street. Those buildings have been freshened up. A great part of that block is occupied by the New York Manufacturers Real Estate Company.

The 43rd Street frontage are all old business buildings—manufacturing. I do not think there is hardly a tenement in that whole street. 43rd Street is a 60 foot street. 42nd Street is a 100 foot street. Naturally I looked all over my maps for sales that would guide, but I found none that I thought were comparable, more than what I have mentioned. Real estate has been more active in the last eight months. I think this one sale to Brown shows more activity than it has shown in years. Just 42nd Street, between 11th Avenue and 12th Avenue, that length of street, I am speaking of. There has not been much activity there except in the last eight months, with the sale to Brown and then the changing hands of the entire block up there which the gas company sold. There has been a great deal of activity in the section west of 9th Avenue running over to the North River. The general section of 42nd Street, 43rd Street and 44th Street that section would run from 34th Street to 59th Street. That is a manufacturing section. I did not find a number of sales there which helped or aided me in my valuation of Lot 23 because I considered 42nd Street was a broad street and was more valuable than 43rd Street or the other side streets. I found the assessed [fol. 924] valuation on the land of Lot 23, Block 1090, for 1923 was $100,000. I have not got it for 1924.

Sheet No. 8 Plaintiff's Exhibit No. 258, the West 44th Street station, I arrived at the valuation which I gave of Lot 16, Block 1092, by using a unit of $12,000 on 44th Street and the same unit on 45th Street. There is 298.58 feet on 44th Street at $480 a front foot, which gives $143,318.40; 248.58 at $480 per front foot equals $119,318.40. The sum of those equals $262,636.80. I gave that a size of 15 per cent and that gives me a total of $302,032.20. I said I thought the property was worth $302,000. I used a lot unit of $12,000; there are 25 front feet in a lot unit. Divide the 12 by 25 and you get $480 a front foot for each running foot; 15 per cent for size. The asesssed value of Lot 9 of Black 1093 is above my figure on my property, $305,000. My value is land $302,000.

On Lot 9 Block *Block* 1093 I used a unit on 12th Avenue of $15,000. To the west on this diagram the property fronts on 12th Avenue. On 12th Avenue it is $15,000 and 45th Street $12,000; 46th Street, $12,000 I gave 15 per cent for size making a total of $350,931 and I said I thought the land was worth $351,000. All of this Lot 9 abuts on 12th Avenue. I allowed for two corners, 40 per cent. The width of 12th Avenue at that point I think is 100 feet. It has been widened and condemned and I think 12th Avenue property is 100 feet and I think there is what they call a wharf street outside of that, making it about 75 feet. 12th Avenue was change- at that point. Given a new route, a physical change, it was moved in toward the east away from the river, and widened. Just what the dimen-[fol. 925]sions are of 12th Avenue I could not say, because I have never measured it, but I know that there is more than 100 feet between it and the bulkhead--between this property and the bulkhead, which is an open street. Between the westerly side of 12th Avenue and the bulkhead itself, there is a wharf street there. I think that is probably what they call it, because the avenue is only laid out as being 100 feet. A wharf street is a name given to a part of West Street and further up 12th Avenue and 13th Avenue and also over in the Marginal Street 18th, 19th and 20th Streets. That is under the supervision of the Dock Department. The streets and avenues are under the supervision of New York City Street Department. You cannot tell where one street begins and where another ends, except I suppose in the de-

partments, they might know. The public has access across and through the so-called wharf street but I think the city rents the right to store goods because all the way down West Street, along the bulkhead, is cargo stored—barrels and all those sorts of things. That is stored on what they call wharf street. I do not think they are allowed to store any goods at all on the avenue. I think the so-called Wharf Street at this point is about 75 feet. I do not know whether that has been finally definitely settled. It varies. Up above it looks as if it was all of 100 feet wide. Just at the corner there of 44th Street it looks only to be only 50 feet wide. On the block between 44th and 45th Street there is a space of about 175 feet, which includes 12th Avenue and the so-called wharf street. In valuing Lot 9, I did not assume that it had water rights or riparian rights, or anything of that sort .

[fol. 926] I appraised Lot 9 as facing on 12th Avenue and the wharf street. I gave value to the westerly end of the lot by reason of the fact that it was near and opposite the river. All of 12th Avenue is opposite the river and I gave my valuation the 12th Avenue unit. I could not tell you how much I added. I did not give it any value because it had riparian rights. They haven't any riparian rights. The property—12th Avenue sales have a certain value which gives it a unit value, and that unit value includes any value it may get from being opposite the water front.

Speaking of these two block-, No. 1092 and 1093, between the westerly end of those two blocks and the river front itself is an open street. There is the gas company's property right on the avenue there. The gas company owned this part of vacant land west of Block 1092 and they sold it in two parcels. That was the sale I referred to a moment or two ago. There have been erected on these plots two modern fireproof loft buildings. In Block 1092, there is a vacant space between the most easterly end of that block there and 11th Avenue. In other words, Block 1092 itself is an irregular line that runs through the width of that block. There were some old lots on the north side of 44th Street that belonged to the gas company at one time and are vacant, immediately next to it, and then comes the warehouse on the 11th Avenue frontage. On the south side [fol. 927] of 45th Street, immediately next to the gas com-

pany's property, are three three-story old tenements, covering 50 feet, that I think belong still to the gas company. I think they are occupied. They are pretty old and dilapidated.

The storage warehouse is at 44th Street and 11th Avenue and was 100 by 100. I don't know what they put in it. There is another warehouse on the southwest corner of 45th and 11th Avenue, and that is marked as being a United States Bonded Warehouse.

On the part of block 1093 that is not shaded in blue on this diagram, that is not vacant property. They have old buildings on there. Immediately next to the gas company's property is a slice owned by E. & J. Burke and he has leased that to the Kimberly Clark Company who are paper merchants. Then comes the Standard Oil Company property and then come some little tenements, I think, and then on 11th Avenue, tenements. The whole general property is changing very rapidly to warehouses and heavy manufacturing, from vacant property and cheap tenements. There is not much vacant property around in that section there now. Since the war there has been a very strong movement over in this West 40th and West 50th Street properties. The section in the neighborhood of 45th and 46th Street 11th and 12th Avenues, is not the neighborhood known as the Hell's Kitchen. I always thought that Hell's Kitchen was down below that section. It may have been 48th Street. I do not think 44th and 45th Streets was Hell's Kitchen. It may be. I would not say but I thought it was 38th Street or 48th Street.

[fol. 928] I found the assessed valuation of Lot 16, Block 1092, for the year 1922 to be $305,000, that is $3,000 over my valuation. I have not got it for 1924.

Lot 9 of Block 1093 is assessed for $315,000. I haven't it for 1924.

On Sheet No. 9 of Plaintiff's Exhibit No. 258 Lot 38 of Block 1028, I used a unit on 57th Street of $125,000. That is the south side of 57th Street. That street is 100 feet wide. There are 120 feet at $5,000 a front foot. I gave them 10 per cent which is $60,000 making a total of $660,000 for size and such extra depth as there may have been—it is a little irregular in the rear there—it is one-sided. This is the same as a lot unit of $125,000 equals $600,000.

The area is, I think, 12,000 square feet. There is a three-story and basement, light stone handsome front building on that, built recently. I do not know the exact date, but I should say since 1919. The character of the development in the neighborhood is high class retail trade, I would say; automobile centers on Broadway. Opposite is the picture gallery. Then the corners of 7th Avenue, there is an apartment house, 12 story apartment house, and on the southwest corner is a 12 story apartment house; on the northeast corner is that new apartment house that Eagle put up; and on the southeast corner of 7th Avenue is Carnegie Hall, including the entire block front there. To the west of the gas property, is a low building, and then comes up the General Motors Building on the southeast corner of Broadway and 57th Street. There is Ajax Rubber Company building between that and the General Motors, and I have just [fol. 929] forgotten just how high that is. I would call that an office building neighborhood. The Fisk Tire Company have put up a large office building running from Broadway to 8th Avenue on the entire frontage of the south side of 57th Street. They put that up and completed it, I think, around 1919 or 1920.

The sales that I consulted which aided me in arriving at the land valuation which I have given for Lot No. 38, are the northeast corner of Seventh Avenue and 57th Street, the plot in there sold to Eagle & Company. We tried to purchase it at that time. It was sold over us to Mr. Eagle. The negotiations that I had for the Benedict Estate in the matter of a trade for their Indian Harbor property, in which they were to be given completed building to be built on the Gould plot there on the north side of 57th Street running through to 58th Street, having a frontage of approximately 50 on 57th Street and 110 feet on 58th Street. 50 feet. The Eagle & Company transaction was a sale. That was not conducted by me. We were bidding on it at the time and Pease & Elliman outbid us. It was less than 250 feet away from this property. The size of the plot there was 103 feet, I think, on 57th Street and 100 feet in depth. That was in October 1921. There were no buildings on it at that time. They were old and all torn down and a new 12 story apartment house put up there and Eagle has the pent house there. I got no information as to that

transaction. By personal interview from the purchaser, he asked me to appraise the property; wanted me to put a very high value on it. That transaction was consummated [fol. 930] by a deed and the deed is of record. He paid $700,000 for the plot on the corner. 50 per cent of one inside lot was for the fact that it is a corner. If I were called on to analyze that sale, I would take 110 per cent of that purchase price, $700,000. That is 110 per cent of approximately $662,000—$633,000 or $635,000 and I would have given it there a corner and key lot, 70 per cent. 70 per cent shows a valuation of $5,300 a front foot, for an inside lot. I have worked back for comparison to an inside front foot value. I added 70 per cent for the corner and key lot. I did not value the buildings that were there originally. I considered it all land value. I made a bid for that of $650,000 for a client and it sold for $700,000.

The Benedict transaction was not a sale. That did not go through. It was an exchange, and the contracts were drawn, the agreements were all ready for signature, and they were sent out to the man—he went out west, and got cold feet. That was not used by me as a guide here. The figures at which the Gould property was being put in, they put it in the tranaction at a million dollars.

There were no other sales besides this Eagle & Company sale that I used as a guide in getting at the value of the land for Lot 38. There have been no sales on 57th Street between Broadway and Seventh Avenue. No recent sales in the last four years so the property has not been very active along there. It is too highly held and too highly developed. I do not think that there were any sales in the last three years in that neighborhood of any office build- [fol. 931] ing property within the last two or three years. The entire block was accumulated between Broadway and 7th Avenue, 54th and 55th Streets, which I know all about, but I do not think that that is comparable to 57th Street. The Goulds plot is for sale, and as I say, a million dollars will buy it or would have a year ago. I think that the south side of West 57th Street is a trifle better than the north side, because in all east and west big thoroughfares, the south side has been the best side. Take 23rd Street, 14th Street, 34th Street with the exception of just at Fifth

Avenue. That was on account of the Waldorf Astoria. The south side of 42nd Street, except where the Bryant Park is, is better. That naturally forces everybody over; I would rather have the south side of 42nd Street between 6th & Broadway. East of Fifth Avenue, of course, the New York Central keeps the crowd on the north side from Fifth Avenue.

The assessed valuation of Lot 1028 for 1923 was $520,000. I haven't it for 1924.

I testified last in the Selwyn Theatre property certiorari proceedings on 42nd Street running through to 43rd Street; last summer, I think, or last autumn. I testified for the owners, and Mr. Adam Wiener was the lawyer who employed me. The certiorari proceedings are set forth in my qualifications. Another besides the Selwyn Theatre proceedings is 18 Broadway. These are all for the owners. That was in 1913 or 1914. I have given them as they came along— [fol. 932] 30 Broad Street, I think was in 1918 or 1919. I have forgotten what others. That is all I have testified to that I can remember just now. I have appeared in my capacity as appraiser before the Tax Commissioner on applications to reduce assessments very often. Almost every year, I go up to the Municipal Building. It has been my practice to appear there for the owners. I have testified at least within the last three or four years in various proceedings, applications to reduce assessed valuations. I testified for the Astors on the Astor House, in February of last year. I have appeared two years, I think, in succession on the Butwell Building on Montgomery and Water Streets, and I appeared within two years, or three years anyhow, on the plot owned by the Harkness, up on the old ball park there, 168th Street and Riverside Drive. I appear quite often for the properties that we manage. Wherever we find the City is in error on it, when we think that they are in error, we take the matter up with them and adjust it.

On sheet 10 of Plaintiff's Exhibit 258 and to Block 1457, Lot 6, in making up my valuation of $179,000 for that lot. I used a lot unit on 62nd Street of $8,000 and on 63rd Street of $8,000. Multiplying the two street frontages by $320 per front foot gave me a valuation of $155,572. I

added 15 per cent size there and that gave me a total of $178,907, and I thought the property was worth $179,000. I found the assessed valuation for 1923 of the land to be $145,000. No change in 1924 that I know of. There were [fol. 933] several sales in there. One was the block front between 61st and 62nd Streets and Avenue A, and then the rear land back of that between 61st and 62nd Streets. I bought the property opposite this property facing on Avenue A and 61st to 62nd Streets. We are just now trying to accumulate a plot for an institution, situated on either side of Avenue A, and I am quite cognizant of prices that the owners asked for properties in that general section. The two sales that I think are most pertinent to this property are the sales by the Standard Gas Company, I think of the block 60th to 61st Streets. That fronted on Avenue A of 200 feet 10 inches and ran back westerly from Avenue A 112 feet. That sold for $130,000. That had some rock and was above grade. They had to blast it out, and they have put a garage on that plot. It was vacant land. I did not conduct the sale, but I advised Mr. Thomas as to the division of the property, and also the price that I thought it was worth, and I advised the acceptance of that offer. Mr. Thomas told me that he was offered $130,000 and asked if I would advise its acceptance. It was sold to Missac Thompson. In September of 1921, the deed went through for $130,000 and it was assessed at $90,000 land only. There was nothing on the land. A garage has been put upon that property covering the whole plot. On one side it is two stories and on the other side it is one story. There is a pitch to Avenue A of 12 feet between 60th and 61st Streets at that point. The assessed valuation of Block 1,457, Lot 6, was $145,000 in 1923. I don't know what it was for 1924.

[fol. 934] April 9, 1924.

Met pursuant to adjournment.

FRANCIS K. STEVENS, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination (continued) by Mr. Donnelly:

On Sheet 12 of Plaintiff's Exhibit 258 and to Block 1157 Lot 1 I arrived at my valuation of that plot of $1,057,000 by using on West End Avenue a unit of $18,000; on Amsterdam, a unit of $20,000; on 65th Street a unit of $12,000; and on 66th Street a unit of $12,000. I gave each corner 50 per cent of the value of the avenue lots, and I added 15 per cent for size, which made a total of $1,057,000.

There are garages, manufacturing, foundries and some tenements to the east of it and to the north of it, and to the south of it 63rd Street is colored tenements. One of the colored suburban homes is on West End Avenue and 63rd or 64th Street. West End Avenue is mostly garages, and above 66th Street it is practically all tenements, with the exception of one corner that is a garage, northeast corner of 67th Street; but the tenemeats were built there before the demand for business came in and they are not proper improvement in that location.

I should say the old tenements were more than 30 years old. The neighborhood has developed into a business neighborhood south of 66th Street. Outside of the Consolidated Gas Company I think I sold the last piece of vacant land in there, on the north side of 64th Street, between Amsterdam and West End Avenue-. That was 100 by 100. I bought that for my mother in 1905 or 1906. I took into consideration and conducted the resale of it. The resale was in 1921. It was sold for $55,000, just for the land. There were standing on there some coal pockets [fol. 935] which the P. G. Kemp Company had the right to take off if they wanted to. They left them there, and I think that there was a little one-story brick coal office there where the scales had been. They were all torn down and a four-story garage was put on the property, since the resale. That was an inside lot.

On the north side of 66th Street there was a sale in there

of 120 feet by 100—120 frontage—in 1920. That was a vacant lane—George B. Grinnel to the Cutting-Larsen Company, $72,000. That was not conducted by me, that was a sale—I won't swear that the consideration was expressed in the deeds, but I have an impression that it was. I got my information as to the price from the Record and Guide. As evidenced by revenue stamps and the fact that there was no mortgage went through with that. That was a cash sale. That was improved since the sale by an eight-story service station—fireproof service station—erected on that block. A service station is where they do over cars and render service to their customers. It was one of the big motor companies.

There was another sale on the vacant lot adjoining to that plot, 25 by 100, vacant. It was accumulated to make up this plot for $19,000. That was an all cash sale. I did not have anything to do with that. As to the price I got my information from the Record and Guide. That is a recorded deed. It was an inside lot and they accumulated it for the purpose of an eight-story building. I would not regard that particular sale as any guide for me in arriving at my [fol. 936] valuation, except that it gave me the total price of what they paid for the entire property. That was the same time—1920. These are all the sales of vacant land: there were a great many other sales in different blocks, all through, which I did not consider would help me. Generally speaking the character of those sales was tenements and improved properties. Some of them were small lots, some of them were large. But the large lots were those on which there were tenements and improvements.

I discard tenements in arriving at my valuation of the land. I discard all sales that I possibly can and pick out the ones that I consider are the most relevant to the property in question. And the other ones that I have discarded, I have looked at and discarded for one reason and another. I thought that my own sale where my mother owned the property, was a very good criterion of what values in those side streets between Amsterdam Avenue and West End Avenue were, because I know all about it. From West End Avenue to the railroad tracks the sale in 1920 was a very fair criterion, in my opinion.

Those are the only sales that I remember as fair criteria. I look at all the sales in the section there and make up my units. My whole office is doing that all the time. We make appraisals all over the city and in any section and in every section our units are being made and change with the conditions that exist in that location all the time, and those are worked out from the different sales in the neighborhood. [fol. 937] A sale in my opinion represents the opinion of two people or two parties—the purchaser and the seller, and I think that in 60 per cent of the sales that go on in New York City, one party or both parties, at least do not know anything about real estate or have never had any real estate training and do not know why they are accepting a price or not. They have never made a study of it. The other 40 per cent represent sales to investors who made a study of what they are buying and to the operators who are looking for bargains.

Therefore, if the sales in a general neighborhood back me up in my opinion, and my opinion is based on my experience, I try to put on a piece of property what I think I would be willing to pay and what I would be willing to buy at. And that is my opinion of its value. If the general sales in that section back me up in my judgment, I am perfectly content.

As I said in my qualifications, I suppose that about $300,000,000 every year are passed on by me and a great many hundreds of millions of dollars are loaned on my say-so. My opinion is made up from what has happened in the general conditions in the neighborhood. The mental process that I go through in arriving at a figure is probably by using the units that my office and I have fixed in that section and multiplying them out and mechanically arriving at a figure. Then I form my own opinion whether that is high or low, or whether the individual piece of property is worth it. There may be certain things about it that I do not think it would sell or I would care to buy that piece of property at those mechanical units, and I arbitrarily cut it, or I may [fol. 938] say, "Now, well, that to my mind is worth more. I would rather own that piece of property than what those mechanical units arrive at, and I will raise it." I think the court claims the market value of real estate is determined by what property sells for and that sales are a criterion

only of value. My opinion of the market value is what I think it is worth. Not what I can buy it for, or what I could, but what I think I would individually be willing to pay for it, or what I would be willing to sell it for. I would not regard one sale as forming a criterion of what the market value is. I think that it is a check. It is a check on a man's opinion—my department and myself, make every effort to get all the sales we possibly can throughout the City of New York. We do that for the purpose of seeing what the trend of the market is, and what is doing.

Where we find more than one sale, all running at about the same price, in a particular neighborhood, that goes to confirm my opinion of what the property is worth, but you would be surprised to see how prices vary. You take in a dwelling location prices on what look to be and are probably assessed as identical houses will vary 25 per cent in selling price between two sales, just because of the psychology of the purchaser—he walks into one house; the decorations please him; his wife likes it; he can pay fifteen, twenty, thirty or thirty-five thousand dollars more for that house than another man who comes in and his wife says, "I don't like the color of the walls; I don't like the way the partitions are fixed," and I will have to change that house all over for my individual use and it is fifteen to twenty [fol. 939] thousand dollars. I won't pay more than fifteen to twenty thousand dollars of what you may think it is worth." It is a very variable question, and it takes a long study and experience to properly handle sales to determine what the market value of real estate is. One sale would not sway my opinion against the general trend of the section, and again, I might discard in my mind fifteen or twenty sales for one sale, in my mind. That I have to use my experience on.

If I found that there had not been any activity in the sale of real estate in a neighborhood, and was satisfied from my experience that the reason was due to the property being held for a high market, I would probably go to the districts where activity was started and work in from there, and generally get the comparison of that section with a relatively useful section in another part of the City.

Now, we run across that all the time. Little localities get

carried away by enthusiasm and you get bulges in the city valuations of sales that are unwarranted. The tenants get forced into paying higher rentals than the location warrants. You will find another location equally valuable and equally well situated that has not moved. Now, we know perfectly well that within two or three years they are going [fol. 940] to get wise that this other section is going to be good, and the instant they start building over there and developing that, the first section will go down. They have gone above the reasonable value and we won't go over a certain height.

That is very well illustrated in that Korn movement in 14th to 22nd Streets, between Fifth and Sixth Avenues. Korn went in there and started in purchasing at about $2,000 a front foot. He was successful in it and everybody jumped in there and began buying. Values got up to $90,000 a lot in there. We refused, after a careful study of the section, to put over $75,000 a lot unit value in that section. We were very much criticized by the other real estate men and by the owners in that section. We, however, maintained our stand on it. As a matter of fact the rents got to where they were paying 90 cents a square foot and business could not stand it. They went up to Fourth Avenue. The bottom dropped out of that section, and you could rent there in 1917 for 30 cents a square foot. That was too low. We would not recognize that rental, and in our mind we thought that that section was worth 50 cents a square foot, and I think we are well justified in what it has proved.

I found the assessed valuation on Lot 1, Block 1157 for 1923 to be $930,000. In valuing Lot 21 of Block 1177 on sheet No. 12, I used the West End Avenue unit of $22,000 on the west side and on 65th Street and 66th Street of $12,000 each. In other words, the same as I used on the block west of it. I gave the two corners on West End Avenue 50 per cent. each, and for the two corner lots facing the west over the tracks, I gave them thirty per cent. I gave that block [fol. 941] fifteen per cent. for size and brought it up to $440,078, and I called the land $440,000. Immediately west of Lot 21 the lot itself abuts on the New York Central Railroad tracks. There is no street there. There is a wall. I think the tracks are about fifteen feet below the street

level at that point. The westerly end of the lot does not abut on a street. There is no access to the lot on its westerly side. You have got to get in either by 65th or 66th Street. The westerly end of the lot adjoins the railroad. There is no spur track into the lot itself, or into the buildings on the lot, that I know of. I would know it if there was. The railroad is not used in conjunction with the lot itself in any way. That is not a traveled street there to the west of the lot; it is just the railroad right of way. I appraised all that property for the New York Central deal with the City in 1917, and there is about 800 feet at the end of 65th Street and a little more at the foot of 66th Street.

I used the same sales with reference to my valuation of Lot 21, as I did with reference to my valuation of Lot 1. The same sales are relevant. All that property is used to a great extent, and there is a great demand there for garages and allied business—the making of accessories and parts and fixing over. There was quite a movement to make that an automobile section there about six years ago, or in 1917. [fol. 942] If this deal with the City by the New York Central had gone through they were going to make this an automobile trade center. It loaned itself naturally to garages and garage purposes, and that is why I think they naturally thought that would be a good place for the freight yards. I would say that in that district there are more automobile and allied business than others.

In valuing these Lots I gave consideration to the fact that the properties could be devoted to any purpose that demanded land in that section. Natu-ally, in any section, the general use of the section determines more or less the value. I considered the lots could be used for a large manufacturing plant, a large motor company—any business that would necessitate a lot of that size. We bought for the hospital, the block on 55th Street, and Eleventh and Twelfth Avenues there and we acquired that for them, and they thought that would be a good place for a hospital.

Any kind of a manufacturing plant is one of the uses these lots could be put to. I did not put any waterfront value on this property. A manufacturing plant would not have any access to the waterfront. That would not be an important element for a prospective manufacturing plant

going in there to have access to the waterfront for deliveries and that is not one of the things which would assist in the course of its manufacturing business. There is not enough waterfront around New York City to give every manufacturing plant access to the River. The National Biscuit Company runs from Ninth to Tenth and then [fol. 943] from Ten- Avenue to West Street. That is a manufacturing plant and has no access at all to the river.

The business probably could not afford to pay overhead of purchasing property that had access to the river front. The gas company owns that property. They have holders there. I did not consider whether they could manufacture the gas there, or not. They are a possible purchaser. I did not pick out any one particular use and limit it. That section is a manufacturing section and any manufacturing can go in. In fixing my value on it, assuming that it was vacant at the time it was purchased or sold, I considered that it might be used, if desired for gas purposes. There may be some specific restrictions against the manufacture of gas in a certain district. This is an unrestricted district, however—zoned—and unless there is some specific restriction against the manufacture of gas in this section, I will assume that they could use it for manufacture of the gas. If they did not use it for the manufacturing of gas they could use is for some other purpose. The Edison People might want to put up their power house. The New York Central Railroad might be interested in the entire proposition as a power house for their electrification of those lines in there.

I am giving all kinds of uses. I know they have a gas manufacturing plant at 99th Street or 110th Street there on the inside, one block removed from the waterfront.

I found the assessed valuation for 1923 on Lot 21 of Block 1177 to be $320,000. What it is for 1924 I don't know.

I arrived at my valuation of $464,000 of Lot 1, Block 1670 by using a unit on Second Avenue of $11,000, on First [fol. 944] Avenue of $10,000, on 98th Street of $6,000 and on 99th Street of $6,000. I added, for the Second Avenue corners, fifty per cent. and for the First Avenue corners, forty per cent. I gave them fifteen per cent. for size, making a total of $463,952, and I thought that that was worth $464,000. The general character of the development there in

that neighborhood is manufacturing, garages and some tenements. No vacant land immediately opposite this property, except that owned by the gas company. Diagonally opposite, on the river front, there are several properties that are used on the waterfront.

South of 98th Street, I have had negotiations, and there were several poorly improved properties in there. They have changed hands, and they have been improved; on the north side there were two lots—two new garages were put up in 1919, one 111 by 100 and the other 185 by 100.

At the Northeast corner of 94th Street and First Avenue, that was a plot 100 by 200 owned by the Sages, and Dean Sage consulted me in regard to it. They leased that property for 21 years and renewal at 5 per cent, of the land value at $4,500 a year, which established, at that time, for the lease, a value of $90,000. The tenant put up a building and has leased it to the Yellow Taxicab and he is getting $11,000, I think, a year from them. There have been nego- [fol. 945] tiations recently between the tenant and Mr. Sage to purchase the land in which I have been interested in the negotiation of. That was a plot of vacant land. There may have been an old shed on it. The land was leased in 1921. It was assessed at that time for $47,000 and no improvement; it was assessed as vacant land and I never considered that any building that stood on it was of any value, if there was a building.

My cousin owned the northeast corner of 92nd Street and that was a sale, but I discarded that because it was improved with old tenements. The southeast corner of 95th Street and First Avenue, 100 by 100, was sold in 1920 for $54,000, John McCarthy Executor, to William F. Cunningham. That was an executor's sale. I got the information as to the price from the Record and Guide and the record of the deed. That was improved property. There was a building on that, assessed at $12,000. The total assessment was $37,000. The land was assessed at $25,000 and it sold for $54,000. That sale showed me that, to my mind, my units were correct. The building did not add, in my opinion, any value, and they purchased by the land value. The entire transaction was $54,000. There is a one-story garage on it now.

I do not know whether they fixed the old building—it was in poor condition. There was an old one-story building, and they fixed it up and made it into a garage. That was a corner lot. I would give fifty per cent for the corner there. There are a good many sales there, but, I do not think any of them are very relevant, because some of them were im- [fol. 946] proved with tenements. I picked them out rather to compare them with the assessed values in the neighborhood. Some of them were small lots. There is 303-305 East 97th Street which had two three-story tenements, and I discarded that. There have been no large sales between First Avenue and Second Avenue of a large piece of property in there, except for the accumulations of 100 by 100 for garages.

There is quite a good deal of demand for small garages 25 and 50 feet in there, by little business men—a good many Italians over there, and then of course there is a demand for large space for large garages. That and general manufacturing has been the character of the development there. The demand for commercial garages in New York is surprising. The zoning law *which* has a great deal to do with it. In other words, permitting commercial garages to be erected within certain districts. They can always get into unrestricted districts. They can also go into and they can get over as far as between Second and Third Avenues, but, of course, aside from these sections they are driven out.

That one-story garage included in that transaction at the southeast corner of 95th Street and First Avenue, is now used as a public garage. I think they rent out space there and let to trucks, and things of that sort. The activity in that neighborhood since 1919 has been in the way of development for garage purposes and small manufacturing. That general condition runs up practically to 120th Street, I would [fol. 947] say. 100th Street is Little Italy to 116th Street, that is between the river and Third Avenue. There are cheap warehouses all along First Avenue and fruit stands and vegetable stands and drays and trucks so that you cannot get through there, and then of course the side streets are full of pushcarts and tenements.

The assessed valuation that is on the land alone for 1923

and 1924 on Lot 1 of Block 1670, I found to be $542,500. That is about $82,000 odd over my valuation.

In making up my valuation of Lot 1 of Block 1692, which is on sheet No. 13 also, I used a unit on First Avenue of $10,000, on the Marginal Street of $9,000, on 98th Street of $6,000, on 99th Street of $6,000. I gave the two corners of the four corners there on Marginal Street and First Avenue 40 per cent each, and I gave 15 per cent for size, making a total of $260,338 and I thought the value of that property was $260,000. Marginal Street at that point is I think 100 feet. I gave the plaintiff company no bulkhead rights because I was told that they owned none. I did not add anything to my valuation because of the fact that the company makes any use of the waterfront there, any more than I would put on any lot at that point facing on Marginal Street, which street is cut off at the lower half and open above. The Fire Boat Department have their fire boats at the foot of 99th Street and it is opened and paved south of that for about, I should say, half the block. There is a [fol. 948] basin that comes in there to 98th Street and I gave no value to the lots fronting on that basin, because I assumed that the bed of that basin was owned by the City, and that they could close it up at any time and make an open street of it. The northerly half of Marginal Street between 98th and 99th Street is open and traveled. I have been on it and turned my automobile around on it, and the southerly half is cut off with a fence. You couldn't go through from 98th Street. You would run into a basin there at the foot of 98th Street so that you couldn't come down to Marginal Street on 98th Street. That basin that was at one time dug out comes right up to the southerly line of Lot 1. The basin runs across Marginal Street, running west.

In arriving at my valuation of Lot 1, Block 1692, I used the same sales that I used in Lot 1, Block 1670. The assessed valuation for 1923 on Lot 1, Block 1692, I found to be $240,000. I don't know what it was for 1924.

I did not make a separate valuation on Lots 8 and 11 of Block 1682, Exhibit 258, Sheet 14. I valued them together because I regarded the two lots and a large plot as in one ownership. I used a unit on First Avenue of $12,000 on

110th of $7,000, and on 111th Street of $7,000. I gave the two corners on First Avenue fifty per cent, I gave them fifteen per cent for size and arrived at a total valuation of $367,710, and I called it $368,000; it was assessed at $422,500 for 1923. I do not know what it was for 1924. The [fol. 949] properties in question are two gas holders.

This property on Block 1682 is zoned to business. The height allowed is one and one half times the width of the street or avenue, and it is what is called a "B" district. That allows general manufacturing, light manufacturing, garages, and so forth. I call attention to the building zone resolution of New York City which lays out the city into use, height and the amount of area of the districts. Each district is governed by the laws or regulations set forth by that zoning resolution. This particular Block 1682 is zoned to business, the height allowed is one and one-half times the width of the street or avenue, and it is what is called a "B" section. The "B" section is the area covered. In a "B" district a rear yard at any given height shall be at least two inches in the least dimension for each one foot of such height. The depth of the rear yard and its lowest level shall be at least 10 per cent of the depth of the lot but need not exceed 10 feet at such level. The neighborhood is being developed for garage purposes. It is a business district. I took the same sales for all of the lots more or less as a criterion.

As to Lot 18, Block 1683, I used the same units on First Avenue of $12,000, and on 111th Street of $7,000. I gave them 10 per cent for size and 40 per cent for the corner there, making a total of $83,865. The gas company owned two lots adjoining this plot on the rear, on 112th Street. [fol. 950] They sold those recently for $17,000, or $8,500 a lot. Lots 25 by 100 each. I did not conduct the sale, but I know about it because I was asked whether they should accept it. Mr. Thomas called me up and asked me whether they should accept that as a fair price. I told them I thought it was a fair price and that they should take it. That was vacant land, and that was sold within the last six months or within the last year, anyhow. They have been dealing on that for a long time. That sale checked me up and made me more sure that I was right in arriving at that valuation of Lot 18. I took into consideration in arriving

at my land values here the other sales that I have mentioned. And all the sales that I have on my book for one reason or another, I would go over them and discard them or use them and check them up. I don't remember what particular sales I used. The assessed valuation of Lot 18 for 1923 and 1924 was $80,000.

In valuing Lot 5 of Block 1704, I used there a unit on 110th Street of $7,000; on 111th Street of $7,500; and on Pleasant Avenue of $9,000. I gave the two corners on Pleasant Avenue 40 per cent each. I gave the plot 15 per cent for size, making a total of $362,639, and I said I thought it was worth $362,500. That property is zoned to business one and one-half time- the street. The easterly end of it along Pleasant Avenue is unrestricted and is usable for heavy manufacturing and can go up two times the width of the street or avenue. I gave a unit of $7,500 on 11th Street [fol. 951] and $7,000 on 110th Street, because it was opposite Jefferson Park there, and it has rather exceptional light coming from the north—exceptional light to the property on Lot 5. The lots facing along that street are for manufacturing or business use. I think the presence of a park on the opposite side of a manufacturing establishment adds to the value because of the fact that the park space gives more light to the vacant land, and I think the city assesses it so. That is not necessarily more true of dwellings than of manufacturing establishments. I think business buildings desire light, and manufacturing plants want light. Some textile manufacturing and dyeing plants need exceptional light.

Between the westerly end of Block 1704, Lot 5 and First Avenue is the Standard Gas Company's property on which there is a ten-story fireproof building. I found the assessed valuation of Lot 5, Block 1704 to be $355,000, and the same for 1924.

The method I adopted in valuing Lot 2 of Block 1712 shown on Sheet No. 14 was: I used a unit of $10,000, it being waterfront property, and gave them $200 a front foot for the bulkhead rights. There are 9,082 square feet in the plot and I valued that at $4 a square foot, or at the rate of $10,000 a lot, is $36,328. There are 209 feet of wate-front at $200 a front foot, $41,914, makes $78,242, and I said I thought the property was worth $78,250. I valued this as

[fol. 952] waterfront property. I did not have any recent sales of waterfront property to guide me in arriving at my valuation recently. We have been trying to collect a plot in there of that whole waterfront, 72nd Street north to 122nd, and we could not touch anything. It is very hard to get waterfront property in New York City. There is very little of it left, and that is held very high. There was a great deal more activity during the war for certain purposes. I think on the East River waterfront properties are renting for more today and selling for more today than they have since 1913. We have bought recently some waterfronts, and we have been looking for waterfronts on the East River, north of 72nd Street. We have not been able to locate any at figures that our people want to pay; but from 23rd Street up to 59th Street there have been several pieces that have changed hands in the last five years, and we have sold two of those. I am looking for a plot north of 72nd Street, but have not been able to acquire it yet.

One of those sales was at the foot of 51st to 52nd Street, Schaeffer Brewing Company, and we sold that about a month ago. And the 42nd Street belonging to the gas company, which I have spoken about before. 43rd to 44th Street to the Swift people—I do not know whether it was Swift—one of those meat men. That is along the East River. I know about them because I had to sign an affidavit [fol. 953] and testify in regard to the 43rd and 44th Street. I think it was Wilson & Company or the United Dressed Beef. They bought what was known as the old Lehigh Valley property there, having a frontage from 43rd to 44th Streets. The lease of 40th to 41st Street was another I negotiated and fixed the value of the rental of the entire block between 40th and 41st, First Avenue and East River. Then there was a piece of property sold on the north side of 37th Street, the old woodyard in there formerly run by William Farrell & Sons. It ran about 150 feet or 160 feet and had 100 feet of waterfront. I know the price of that, because the Mutual Life have a mortgage on that property, and we went into it very carefully. Also the 35th Street between First Avenue and the river, William P. Young. That sold within the last year. I know the price on that. That we verified and got in a confidential manner. On 32nd Street and the East River, the grain elevator that was pur-

chased during the war and then resold. These properties generally are helps in determining the values of waterfront properties. I take these into consideration as aiding me in fixing my value. Only general experience in sale of water front and what value—waterfront has a certain more or less relative value according to its situation and location in the city. Any sale of waterfront has a relative value, and I am anxious to know about it. I think a sale down here in 27th Street could not be used unit for unit as a comparison up in 110th Street.

[fol. 954] The assessed valuation on Lot 2 of Block 1712 for 1923 is $52,500. That refers to the land alone and bulkhead rights, I suppose. Bulkhead rights are included in the assessments. They give a value in addition which is included in the assessment. I think that assessed valuations would have been split up. As to how much the assessors would indicate for the land and how much for the bulkhead rights, I cannot answer that on this particular piece, but they generally assess it. Where it is covered by one block number, I do not believe they have assessed it separately. I think they probably assessed it all as a whole.

There was some waterfront property north of that at the foot of 51st to 52nd Streets; which has recently changed hands, and that was the Ehret Brewing Company on 63rd Street to 64th Streets and the East River, and then that was resold to the Rockefeller Institute within the last two or three years. That was not a transaction which I took into consideration in arriving at my valuation here, but, it entered into values that I have put on properties in the 60's. As a general indication of waterfront value, that transaction has been one of them. There were none north of 63rd to 64th Streets that I recollect. I do not regard the transactions with reference to the waterfront at 32nd Street and 35th Street between First Avenue and the River that had been resold, as guides in enabling me to determine my valuation of Lot 2, Block 1712, except as showing the relative value of waterfronts at that point. In other [fol. 955] words, I would not regard that as a criterion for the value of Lot 2, Block 1712, not lot by lot. There is a relative value. That transaction, 35th Street between First Avenue and the river, was within the last year. I did not

conduct it. It was approximately 152 feet or 153 feet along First Avenue and running easterly to the river, with the same river frontage. 155 feet—it was a straight line, parallel. Bulkheaded. It used to be the W. P. Young Brothers Lumber Yard. I don't know what they are going to use it for. They have not done anything to the property as yet. The bulkhead always has been used in connection with the property itself. I do not know what they are using it for just now. The consideration there was $350,000. Where I got the information from is confidential, and I do not care to say where I got it. It was certainly satisfactory to myself. It is or will be a transaction of record. I will give the entire transaction. I did not conduct that negotiation. I regarded only relatively the transaction on the north side of 37th Street, as a criterion or a guide in enabling me to determine my valuation of Lot 2 of Block 1712.

Where my units and my values on pieces of property correspond or are lower or higher than the actual sales in that section, that gives me a guide where my opinion is running. Now, these sales, if I am right or low or high in a given section, then I know my relative value is correspondingly high, low or right. These sales—many of these properties [fol. 956] I had appraised. The Young property I had appraised. The 37th Street I have appraised.

By the Master:

The relation these sales have to my valuation of this Lot 2 of Block 1712 would be that where I found that my valuations on lots which had been sold, or valuations I have placed on them, approximated selling values, it confirmed that my judgment on waterfront property was approximately correct. I used these sales merely to confirm my judgment, and not as being a comparative sale with the valuation of this property up at 111th Street.

By Mr. Donnelly:

That property runs about 180 feet on the north side of 37th Street. The 35th Street property was 150 feet in width and ran from the East River back to First Avenue, about 400 feet. The dimensions of the property on the north side of 37th Street, are a frontage of 95 feet on the water-

front, running back approximately 140 feet. That sale was four or five years ago. I did not conduct that, but I appraised it. As to the consideration of that transaction, I have left all the data in regard to these things over at the office. That applies to all of these waterfronts.

Take those sales and leases that I have given of waterfront property, beginning with the 163rd-164th Street and running down to and including 131st Street between First Avenue and the river, I did not use any of those sales as guides to enable me in determining the unit value that I used on those blocks or lots, but as a mode of comparison only. The city lays out in their land value map, which gives front foot values on every street and avenue in the [fol. 957] city, together with their opinion as to the front foot bulkhead values. From a glance at that map or that book, it will give you their opinion of the relative values in any one part of the city. We run our appraisal department very much on the same lines. We have units that we use in certain parts of the city and front foot values and relative values. Now, if a sale appears and shows our units of waterfront in one section of the city, or a number of sales show that, to our mind that we are low, high or right, that bears out and helps us in arriving at the values in sections where few or no sales have occurred. We know the value of surrounding property and the upland values and relatively those are spelled in or merged into the waterfront value. If there is a certain relation of values by the front foot, say between 35th Street and 111th Street on First Avenue, or that relative frontage towards the water—there would be approximately the same relative values between the waterfront property and the 35th Street and the waterfront property at 111th Street. And if the city assessors fix a relative front footage between the two localities, that would give me a method of comparison, that is all. In some cases, that is what I use these properties for. The bulkhead rights are rented by the front foot.

The details in brief of the transaction at the north side of 37th Street, with 150 feet of waterfront, are: Beginning at the 35th-36th Streets, that covered a plot 151 feet 3 inches [fol. 958] on First Avenue and 321 feet 4 inches on the north side of 35th Street running through to the river and having

a frontage on the river of 153 feet. That was sold by Young Brothers to Burns Brothers, Inc., the coal people. That sold for $350,000. It was assessed for $153,000 and I appraised it in 1922 for Seth Sprague Terry and valued it at $255,000. The sale price over the assessed value is more than 200 per cent. My units on that property were First Avenue, $10,000; waterfront lots, $10,000; the bulkhead $250 a front foot, and street lots, $8,000. That sale shows in my opinion that my unit was lower than the market value of that waterfront. There was a period of two years elapsed between the time of my valuation and the time of the sale, but not as to the assessed value. The assessed value made no difference in the value.

The south side of 35th Street, 608-614 First Avenue, having a frontage of 98 feet on First Avenue and running to the river, 323 feet on the south side of 35th Street, was Jeremiah Skidmore's coal property and that was sold for $210,000. That was sold in 1922. That was more or less a family affair, the Skidmore & Son Corporation to Skidmore Realty Corporation, relieving, I think, the coal company and some of the family of the carrying of the real estate. It, however, indicated their idea of the book value of that property. That property was assessed for $181,000, for 1922. My values on that would be $10,000 First Avenue; corner 50 per cent, that is, $5,000; five lots on 35th [fol. 959] Street at eight, is $40,000; four lots on the river at 10 would be $40,000; bulkhead, 100 feet at $250 would be $25,000 and 15 per cent for size, $22,000 more—$175,000. The buildings were assessed for $25,000. I would not give them that value because they were special buildings for the handling of coal. I have put them in at $25,000, the assessed value, $200,000 for the property. It sold for $210,000.

In July, 1923, I appraised the entire block belonging to the Eldry Andersons, First Avenue, 36th to 37th, running to the East River, with riparian rights. That was leased in three parcels, the waterfront to Burns Brothers, the corner plot to another concern, the northeast corner of 35th Street, and the southeast corner I did not have the rentals of that building. I think it was rented out to separate owners at the time I made the appraisal. I used there the

units, in July, 1923, First Avenue unit, $10,000; street unit, $8,000; waterfront, $10,000, corresponding with my units in 1922 of the immediate block below.

I appraised in 1921 for the Standard Gas Company their entire block, First Avenue, 40th to 41st Street, East River. I used a unit of 11,000 on First Avenue, street of 8,000, waterfront unit of 10,000, bulkhead $300 a front foot at that point, adding 20 per cent-for size, which gave a total value of $515,000. They leased that to the Edison people at 6 per cent net of my valuation. I believe it was agreed before I was asked to appraise it that they would enter into a lease on the basis of my appraisal.

[fol. 960] The next sale was 43rd Street between 43rd and 44th. Exterior Street. That was sold by the Grace family to the Dressed Beef Company. That sale was for $325,000 in 1917. The assessed value of that property is $200,000 for the land, $15,000 for the building, a total of $215,000.

In 1923 Horace S. Ely & Company, Cruikshank & Company and myself or Mr. Devoe, Mr. Altruder and myself, were asked to express our opinion on the value of that property as of 1913, in regard to the sale. We signed an affidavit in which we jointly concurred that the property was worth in 1913 $275,000. In 1923 we appraised this property as of 1913, and signed an affidavit to that effect. At that time I used the same units that I used on 40th and 41st Streets, namely, $10,000 a lot on the river and $8,000 on each of the streets, giving $300 a front foot for the waterfront privileges. They realized that that sale of $325,000 to the Dressed Beef Company was a high sale and did not represent in our opinion the market value of waterfront for other purposes than the beef company. The dimensions are: On 43rd Street, beginning at a point 350 feet east of First Avenue it ran 175 feet to the bulkhead and then along the bulkhead from 43rd Street to 44th Street, and then along the southerly side of 44th Street 110 feet to a point 350 feet east of First Avenue, and then a straight line through the block from 44th to 43rd, 200 feet 10 inches to the point of beginning. There was some land under water there to the bulkhead line amounting to 88 feet on the [fol. 961] southerly line and 173 feet on the northerly line, by 200 feet. This showed to me that my units there were exceeded by the sales.

I appraised the north side of 48th Street, beginning 325 feet east of First Avenue and running to the river, and having a frontage of 162 feet on the north side of 48th Street and a depth of 100 feet 5 inches. It had a frontage on the river of the same length. That was occupied and improved with a five-story fireproof warehouse. It was the old Warner Sugar Company property. I appraised that in 1919 for $210,000, for Henry A. Rabinow, and also for the Warner Sugar Refining Company. I don't know what the appraisal was for. They merely asked me to appraise it. I furnished them with what I thought the property was worth. I don't ask them unless they volunteer. I think I know what the specific purpose was of appraising that particular piece, but I was not told by them. It was foreclosed shortly after that and bought in at practically my figures. It was sold at foreclosure. Public auction sale, a matter of record. I do not regard a sale at public auction as a fair criterion of value; nor a foreclosure. I just mentioned that fact. It has been sold recently, on June 6, 1923, for $210,000 to Owen & Company—the Independent Warehouses to Owens & Company. I don't know what Owens & Company are doing with it. I have not investigated it. It was assessed for $150,000 for 1923, showing that the sales price was 25 to 30 per cent more than the assessed valuation.

The next big piece was the Brewery Company plot on the east side of Avenue A, 63-64. That is the Ehret's plot. [fol. 962] That had a frontage on Avenue A of 200 feet 10 inches, on 63rd Street, 351 feet, on 64th Street, 479 feet, and ran to Exterior Street. It had no water rights. It was foreclosed and put up at auction and sold three months after my appraisal of that property in September, 1916, for $400,000, using the avenue unit of $10,000, frontage on Marginal Street of $10,000, and the streets of $6,000, giving bulkhead rights, and so forth. The appraisal was made for the Guaranty Trust Company. I think that they held the mortgage or were instrumental in bringing about the sale, and they wished to know at what price—it was then owned by the American Malting Company. That was sold at auction by Joseph P. Day and brought $475,000 five months after my appraisal. The property was assessed at that time, for the year 1916, at $330,000. My appraisal figure was $400,-

000 and it sold for $475,000. The property has since been sold just recently to the Empire Mortgage Company—Empire Realty Company, I think, which is the holding company for the Rockefeller Institute, and that was sold for $650,000, all cash. The sale to the Empire Mortgage Company, the property was assessed for the year 1922, the date of the sale. The sale was, I think, 10-17-122, the deed was filed, and the assessment was $365,500, and it sold for $650,000. Now, how that had a bearing on my figures is this: That these sales showed that the city *are* constantly low in their valuation of the waterfront property. I have taken a good big stretch of East River, and I am telling you how it affects my mind and how I arrived at a conclusion up above. My criticism of their [fol. 963] figures would be that the units on the land back of the water, and in connection with the water, are not given sufficient value, nor do they recognize that large pieces of property command a value that small lots and blocks do not, and that size has got to be added to the value of these plots. It also brought out that I am conservative in my lot units and block units, on the avennes and the streets, that where they have sold and where I have appraised, they have sold for above my figures. I have used the same methods in arriving at my appraisals in 99th and 110th and 111th Streets, on the same basis, under the same conditions that I appraised all this property for one purpose and another in years dating from 1913 to 1924. That waterfront carries with it a value of its own, and it supersedes the value of the interior land. It may be influenced and is probably influenced to a certain extent by the occupancy of the—well, the only word that came to my mind was "hinterland"—of the back property, but it has a value in itself which is entirely separate from the back land. Therefore, my waterfront lots and units are governed by what I consider the water front influence. Side street lots and avenue units are governed by the locality in which they are placed and the size and desirability of the plot is added by my experience. I think that is the way I have used these waterfront sales that I have mentioned. The stretch of the East River from 35th to 63rd Streets has been the most active from 1917 to [fol. 964] date. There are more sales further south, which I did not wish to burden the record with.

As New York property runs, the center of the Island and the main arteries of the Island have a very much higher retail value than the outlying districts, and it graduates out and graduates out. Therefore, logically if it were not that the waterfront had an influence, you would go down to practically the lowest value of the lot next to the waters, whereas that is not the case. The waterfront lots in my opinion, and I think it is shown throughout the city, sell for very much higher than the blocks between the next avenue and the third avenue away from the river, or the second avenue away from the river.

That sale to the Empire Mortgage Company was for the Rockefeller Institute. They bought that. They owned from 64th Street to 68th Street. If you go past there, you find that they occupy with buildings very little of that land. They acquired it—I think they paid a high price for it. That is just my guess. This parcel that was bought for the Rockefeller Institute by the Empire Mortgage Company still has the brewery on it. Rumor at the time had it that the Rockefeller bought it for prohibition purposes. I don't know if it is the intention of the Rockefeller Institute to develop that property. I assume that eventually they will. They occupy the entire land between Avenue A, 64th Street and 68th Street, and the river, but not with their buildings. They own the land there and a great deal of it is a lovely park. That Empire Mortgage Company purchase for the [fol. 965] Rockefeller Institute was a purchase of waterfront property as such; they had to purchase the property as it was. It was situated next to Marginal Street and, as a matter of fact, had a grain elevator situated in the heart of Marginal Street and used waterfront. They had no legal right to the waterfront, I don't think. I don't know why the Empire Mortgage Company purchased it for the Rockefeller Institute. I do not know what they purchased. It just remains the old brewery building and as a matter of fact, the 67th Street, they own up to 68th Street, and there they are faced with the Central Brewing Company on the north side.

The total of $365,500 was the assessed value; the land $189,500; total $365,500. That was for 1922. I haven't the assessed valuation there on that plot for 1923 because

those were not published at that time and were not known. I have not looked up the 1923 assessment, because I take the assessments as they stand on the books of the year there. These are given right by the Record and Guide. I did not look up the assessment. That is all right, but that is the only thing that I have had time to look up.

The lease by the Standard Gas Company to the Edison Company was 40th to 41st Street. It showed the confidence in 1921 of two companies to agree to my appraisal as setting the basis of a rental. I think that this was a family affair. I do not know whether the New York Edison stock [fol. 966] is entirely owned by the Consolidated or the Consolidated by the Edison. If individuals own Edison and other individuals own Consolidated Gas why, then, I think that they would have to be very careful of how they moved.

Taking that transaction 43rd to 44th Streets where I appraised in 1923 as of 1913, I did not regard the valuation that I gave of $275,000 as of 1913 a fair guide here.

On Sheet No. 15 and referring to Lot 33 of Block 1642, I arrived at my valuation of that lot by using a unit on Third Avenue of $16,000 and on 114th Street of $10,000. I gave them 50 per cent for a corner, and that amounted to $44,147 and I added 5 per cent for size making $46,354. It has 25 feet frontage on Third Avenue, with an L 50 by 100 on 114th Street. In other words it is 100 feet in depth with 50 feet—two lots facing on 114th Street and one lot on Third Avenue. Lot 33 is all of that part of the lot which is shaded in blue on that diagram. There appear to be a lot No. 32 indicated on there but crossed off because the City have now assessed that—so I am told—as one lot. Lot 33 is included within all of the area shaded in blue on said diagram, so I am informed. That is the basis on which I appraise it. It runs back parallel with Third Avenue 100 feet 11 inches on one side and 75 feet 8¼ inches on the other side, on my map.

My sales are 2036 Third Avenue, just north of the gas company, sold in 1922. The Estate of Gustave Bosh to Julia Hecht, $32,000. It was resold to Henry Earger for [fol. 967] $37,000. That is a 25 foot plot frontage by 100 feet in depth. There is a five story brick tenement on it, and using my units of $16,000 that would be $16,000 and $16,000 for the building. That building in my opinion, does

not add much more than that to that plot, and it sold for $37,000. It is a five story old time tenement. It was assessed at $29,000. The assessed values and my value is the same as the assessed value on the land. I agree with the City as to the land value, or practically the land value at that point. That sale was in January 1922.

In April, 1922 the 2094 Third Avenue was sold, and the house next door to it, 2096. Those are in April, 1922 and the last one was in June 1922, right next door but one. It is on the same block between 114th and 115th, right in the center of the block there, those two buildings, the southwest corner. The prices sold: Smadbeck to Lachenbrush, $37,500, and resold to Harry Sussman for $39,000. The deeds were practically, I think, identical. I mean, I think they went through both in the same month. Assessed $30,000; land $20,500; buildings $15,500.

2096 Third Avenue was Minnie Fisher to Harris Sussman, the purchaser of the one next door; $42,400. It was assessed at $36,000, and then Harris Sussman sold both, I think, to Ladi Ginnis, for $84,000.

Southwest corner of 3rd Avenue and 114th Street, sold in 1923 for $33,000 and then again for $36,000. It was assessed for $28,000. That is a private sale which is not, I think, recorded as yet. That is that little frame building on the southwest corner of Third Avenue and 114th Street. [fol. 968] 2072-80 Third Avenue, sold in May 1920, public auction, $55,000 Estate of Mary E. Jones to Bernard Tabakman. That is a piece 75 feet south of the corner of 114th Street and Third Avenue. The plot is 75 by 100. There were old buildings on it, and they have recently built a moving picture theatre on it. In some cases—they were all taken from the Record and Guide—but in some cases we verified them by communication with the parties that sold them, or the brokers. I did not have any sales myself, just at that point. We sold, on the northwest corner of 115th Street, in 1916 that was the nearest sale—prices have not changed so much since then. It is the assessments. I have not got with me a memorandum of the nearest sales in the section. I know we have made several in there recently.

We got our information as to the price of the property at 2094-2096 Third Avenue from the Record and Guide. It

was sold for $37,000, that was not sold to Ginnis. No. 2096 is the sale where Sussman sold to Leda Ginnis, and he sold both of those houses for $84,000. I got that from the Record and Guide. There were mortgages and all kinds of things in there. No. 2094 was sold subject to a mortgage of $20,000 in the first place and then for a mortgage of $31,500 in the second place, so the total mortgages on that was $31,500. The mortgages on No. 2096 was $36,000 so that there is $67,500 total mortgages on that property.

[fol. 969] Referring to those waterfront properties, transaction at 35th Street, I received my information of $350,000 from the broker who made it, Mr. Matthews. That information has been published in the newspapers. The transaction is of record now. The stamps correspond to the figure.

For 1923 I figured the assessed valuation of Lot 33 Block 1642 to be $48,000. I do not know what it was for 1924.

Referring to Sheet No. 16 of Plaintiff's Exhibit No. 258 and to Block 1998, I have valued the lots 50, 53, 54, 55 and 56 altogether. I did not take these separately. To make up my valuation there I used a value on 131st Street of $10,000, a value on 132nd Street of $10,000. That only has a frontage on 132nd Street. There are seven lots. The plot is 175 feet frontage, $10,000 a lot is $70,000; 15 per cent I gave them for size, which makes $10,500, making a total of $80,500. I thought the property was worth $80,000. Lot 50 I assumed is 75 by 100. There are four there which constituted the entire frontage of 175 feet but there are no measurements on those other lots. They run back 109 feet 11 inches, the half block. I did not give any consideration to the fact that the lots were less than 100 feet in depth. My unit ran to the center of the block. I added 15 per cent for size.

I conducted a sale in that vicinity, which acted as a guide to me in arriving at the valuation of these lots, to the Studebaker Company of the property right next to Lot 16, to the east of Lot 16. The Standard sold it to the Studebaker Corporation. The Studebaker people came to us to find [fol. 970] out what they should pay for the property, and we wrote them a letter which made Mr. Thomas very much upset. The property sold for $167,000. The size of the

plot was 175 feet on West 132nd Street and ran directly back to 131st. That is 199 feet 10 inches. No buildings on it, noa at that time. I treated it as vacant land. There was a little bit of a brick building, I think, standing over on one corner of it, and they have torn down and put up there new building there which is a six story, very fine building. Using my units of 10 on each lot, that would be 14 lots, $140,000; 15 per cent $21,000 and that would be $161,000 for that plot. It was sold for $167,000. The sale was in January 1923.

There were other sales, but I thought that was the most pertinent sale and I knew considerably about the negotiations of it. The block front there was sold between 131st and 132nd Streets, on Broadway—the Boulevard. I did not have to do with it but I know about it. I have no sales myself. The Boulevard sale was an executive sale of Archie D. Russell Estate—we did have something to do with that too—to Bowan, Inc. It was sold for $120,000 in 1920 and it was assessed for that year at $113,000. That was all vacant land, running the entire block front, running went back 100 feet. A new garage has been put on that property, covering practically the entire plot. The garage is either three or two stories high.

I did not give any units on Broadway for Lots 50, 53, 54, 55 and 56. They only front on 132nd Street. The subway [fol. 971] comes out and runs overhead there, and you are right down in an unrestricted neighborhood. The garages and milk companies and all that is in that general section. In 1920 I do not believe that we would have used a unit on Broadway much over what the side streets were. It has the same use as the side streets.

The sale of the block fronting on Broadway is a recorded sale—an executors' sale—Archie D. Russell, is a relation of Mr. Percy Pyne, and also is very close to Mr. Robinson. I probably looked over all the sales in that general section, but I thought that those two were the most pertinent. I have the value of the property right next door—a sale of the property right next door, to a perfectly open buyer. This is an unrestricted neighborhood. It is right in the valley between 122nd Street and 135th Street. The subway comes out from Broadway at 122nd Street and runs as an

elevated from 125th Street and does not go into the ground until 134th Street. 131st Street is cut through. The Manhattan College stops 132nd Street. It runs down hill from Broadway down to 12th Avenue and at 12th Avenue you run into the warehouses and freight houses along the New York Central tracks. I appraised also all that property in there for the New York Central Railroad in 1917. 12th Avenue is not occupied in part by the railroad. There is a big viaduct that Riverside Drive runs over and it is some 90 feet, I guess, above the bed of 12th Avenue. The gas holder is just about level with Riverside Drive and the warehouses—the tops of the warehouses are below Riverside Drive viaduct.

There has been considerable property changed hands in that neighborhood in the last few years. The gas company [fol. 972] has sold a good deal of their property. They sold to the Fifth Avenue garage the property all to the east of their holder on 132nd Street and 133rd Street. That was back in 1910 or 1912. The assessed valuation of those lots, 30, 53, 54, 55, and 56 of Block 1998 for 1923 on the land for 175 feet is $50,000. I do not know what it is for 1924.

In making up my valuation of Lot 1, Block 1999 I used the same units on 132nd Street and I used the unit of $9,000 on 133rd Street. I gave 40 per cent for the corners on 12th Avenue. I gave no 12th Avenue value at that point, because I thought that the side streets had fully as much as the avenue, and I ran my units all the way down on the side streets to 12th Avenue. I added 15 per cent for size, making a total of $227,240 and I said I thought it was worth $227,000. That lot is right on the grade of the street. There is a viaduct right on the grade above 12th Avenue. From 12th Avenue that is 90 feet above the street level. I took the same sales in arriving at my valuation there as I did for the other lots on the same sheet. The rest of the block is improved. The 5th Avenue garage have bought to—within 100 feet of Broadway. The gas company, as I say, if I remember rightly in 1910 or 1912—it was before 1919. They built a three story garage on the easterly part and a one story garage on the westerly part. They are now adding a story to the westerly garage. They occupy the rest of the entire block, with the exception of the Broadway

frontage. There are some tenements on the northwest [fol. 973] corner and then there is a six story apartment house on the southwest corner of 133rd Street.

I gave a unit of $9,000 a lot of 133rd Street as compared with the unit for 132nd Street, because I did not think 133rd Street was as valuable as 132nd Street. On the north side of 133rd Street is a great big rock that goes up some 25 or 30 feet, I guess, above the level of 133rd Street, and then it runs down hill—it is very much steeper than 132nd. Broadway going up and 12th Avenue at that point, remaining at practically the same level, makes 133rd very much steeper. They have got a lot of little garages planted on the rock up there that they rent for that purpose, and I think it will be a long time before that rock is cleared off. It is a pretty expensive job and opposite an *in*developed side of a street like that I did not think it was worth more than $9,000. The rest of the block on Broadway between 132nd Street and 133rd Street is unoccupied. The rock is about opposite this holder. To the easterly end of 133rd Street on the north side, are developments there and then apartment houses along Broadway. There is a building on the northeast corner of 12th Avenue there which runs back 100 feet from 12th Avenue and then comes the high rock.

The Manhattan College site was across the other side of Broadway running from 131st Street to 133rd Street; from the Old Broadway to the present Broadway. I think that has been abandoned. I don't remember how the property is being used. That leaves a lot of vacant land there or a lot of unused land. There is a good deal of vacant [fol. 974] property still in New York City and there is a good deal of vacant land around this section but you must remember that the occupations change somewhat. Here is an unrestricted district and that is being grabbed up very fast in New York City, those unrestricted districts. The old Manhattan College site is unrestricted vacant land and there is not so very much left there. There is a good deal, of land still to be bought and sold in New York City, some vacant land, too. Between 12th Avenue and the river are freight warehouses, the New York Central tracks and then there are some docks on 131st, 132nd and 133rd Streets. The warehouses facing on 12th Avenue, between 12th Ave-

nue and the tracks, the Central tracks; then come the Central tracks, then comes a street on the other side, and then there are several docks in there. The river is 400 or 500 feet from 12th Avenue there. There are no garages in that section; that is freight in there. They have been there for a long time.

The assessed valuation for 1923 of Lot 1, Block 1999 was $165,000. I haven't it for 1924.

I made up my valuation of Lot 23, Block 2108 shown on that sheet by using a unit of $10,000; there were two lots, that makes $20,000, and I gave them 5 per cent for size and that made $21,000. I allow for size on a lot 50 by 100, because you can build an apartment house or a stable or anything I think two lots in that location are worth a thousand dollars more than two single lots. You can build an apartment on a 50 foot front. Right opposite there are three of them, five story and basement built on a 40 foot lot. They [fol. 975] are the old railroad plan apartment running back seven and eight rooms in depth with a long hall. I did not have any sale in that immediate section that I took as a guide in arriving at my valuation of that lot. Just below there, 139th Street, we have made quite a number of sales in there, for the Clark Estate, and at Broadway and 160th and 162nd Street, just north of this property. That has not been a very active section. The character of the neighborhood generally speaking, is all residence in there. This is the only stable—in those two or three blocks around there. That lot 23 is not a vacant lot. There is a four story building on it, a stable or a garage. I found the assessed valuation upon that piece for 1923 to be the same as my valuation, to-wit, $21,000. In that case I agree with the assessor. I was not asked to regard the buildings as adding anything to the value of the land. I have appraised the property as vacant land right straight along the same way as I have appraised every piece of property in this proceeding. I haven't got the 1924 assessed valuation.

Referring to Sheet No. 18 of Plaintiff's Exhibit No. 258, I think it was in September 1923, when I visited this property for the first time, for the purpose of this appraisal. I visited it several times, the last time being about two weeks ago. I had considerable familiarity with the property out-

side of the visit that I made for the purpose of the appraisal. I have been going over that property for the purpose of forming opinions and the surrounding property right in here where the market is going to be, and for the [fol. 976] condemnation of the Astor properties, and the Morris properties, the Harlem River front in there.

There is to be a market on Cromwell Avenue, Ferncliff, Exterior Street. I got that information from good authority. The foundations are being put in there for the building and our insurance maps show the construction of a building in here now. They had been putting in foundations on the market building. The last time I was there about two weeks ago there was work being done there. I assume that is is going to be a public market and that the property is going to be condemned by the City of New York. It is a city project. I assume the plans have been approved for the construction of a market there. I don't know for a fact. I knew that the condemnation proceedings had been abandoned; I did not know that the project had been abandoned. I think the condemnation proceeding is to establish the value of the property taken or for whatever purpose the condemnation proceeding is brought. That was one of the purposes I know, that they started the condemnation in there for the market. I probably did hear why the condemnation was abandoned but it has not registered. I know the proceedings have been held up. I did not testify in the condemnation proceedings. I did not represent any of the property owners of the property taken in condemnation any more than an expert witness. I did not make any appraisal of the property there for the purpose of the market site.

I was asked my opinion verbally and otherwise by different owners in there, the Morrises and Astors, what I thought that property was worth, and by several attorneys. [fol. 977] I am referring to this general stretch of waterfront. A good many experts have come in to me and asked me for advice as to the units. The Astors own that water front there in Block 2497. The waterfront is next to the Harlem River. Certain attorneys have asked me as to my opinion. I don't know whether they are the attorney for the owners or not. I know that property; I have been over it recently. I am familiar with the property. It is

about 6 feet below the grade of 153rd Street and 151st Street. It is situated within a block of the Yankee Stadium which I think we all know. 157th Street is asphalted and is a very nice looking street. The track of the New York Central runs along the southwesterly line of this property. It is a vacant piece of property. The land along 153rd Street is below grade all the way to Cromwell Avenue and along Cromwell Avenue, the land is marshy and below grade. It is filled in land. The creek comes in in a different location, about a thousand feet away or a little more, I think, from Cromwell Avenue. Lot 132 is, I should say, about six feet below the level of Cromwell Avenue. The land at 157th Street is filled in land. It only just touches Exterior Street for a small point.

Lot 132 is below the grade of 157th Street. It is all about level there and about an average I should say of six feet below, not quite so much below the level of 157th Street as [fol. 978] it is at Cromwell Avenue. I think Cromwell Avenue is a little higher, I would say, than Exterior Street. There is a place on this property used to store automobiles there for the Yankee Stadium, last summer and the summer before. Cromwell Avenue, 153rd Street and 157th Street are regularly laid out streets. 157th Street is asphalted; 153rd Street I do not think is asphalted but it is open and you can go over it. I don't think it is paved. Cromwell Avenue is asphalted down to about 153rd Street and then they are fixing it over so that you can't drive across the tracks now, they are fixing the bridges, doing something there. The railroad tracks of the New York Central and Hudson River Railroad with reference to Lot 132 are along the southwesterly side. The ownership of the New York Central runs up and joins this property but the tracks themselves I would say are—I did not measure it—about 20 feet I should think away from the line there.

I arrived at the valuation which I placed upon Lot 132 by using the units that we have been using in that section right straight along of $3,000 a lot. There were I figured 63.40 lots, at $3,000 a lot, would make $190,200, and I thought the property was worth $200,000 including the two corners there, 153rd Street and Cromwell Avenue and 157th Street. It is all vacant. I did not add anything at all to the value of the land by reason of its contiguity to the railroad tracks.

I gave them no consideration except it is there. I did not consider that there was any spur or anything of that sort. There might be a possibility of putting a spur in. That I did not consider. There is a great deal of vacant land in [fol. 979] the immediate vicinity of this property, and there has been activity in real estate there recently. The Yankee Stadium property was vacant property before they bought it.

There has not been any other activity right in that immediate neighborhood there outside of the Yankee Stadium, because the city has been threatening condemnation on that whole waterfront there. If they take that that will be quite a block out of that vacant land. The property owners are afraid of it, I think, and I think that question has been brought out several times. I think the Corporation Counsel went so far as to employ experts on some of that property for some purpose or other, for condemnation for some purpose or other. I don't think they have appointed their experts for the waterfront there yet.

There have been no recent sales there outside of the Yankee Stadium Baseball Park which acted as a guide for me in making up my valuation of this lot. There was a sale to Kimberly up on Walton Avenue and Cedar Lane. It is not so very far from this property. It is about as far as the mouth of Cromwell Creek. As a matter of fact, that land is two or three hundred feet nearer Cromwell Avenue than the mouth of Cromwell Creek. Referring to the Kimberly sale, at Walton Avenue in 1922, there are a little over six lots in the property that was sold as vacant land. It was sold to Kimberly. This tin plate manufacturer. There was something wrong with the title and he gave it up. The sale didn't go through, but I mean there was activity in the neighborhood. I don't call that a sale though, in the sense that deal was consum-ated. The title did not go through.

[fol. 980] April 10, 1924.

Met pursuant to adjournment.

FRANCIS K. STEVENS, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination (continued) by Mr. Donnelly:

I was informed of the price paid by the Consolidated Gas Company for the purchase of Lot 132, Block 2497, shown on Sheet 18 of Plaintiff's Exhibit 258, but I did not have anything to do with that negot-ation. I was told it sold for $202,000 or $203,000. I think Mr. Alrich informed me it sold for somewhere in the neighborhood of $202,000 or $203,-000, and I think I got it in writing also from Mr. Thomas or Mr. Thomas's secretary. I think the transaction is of record. I would not swear to that, because I did not bother to look that up; because I took their word for it, and if they cannot make good on it that does not affect me. As to who purchased it, I have that in my office; but it made no differ-ence to me, and so I did not burden my memory with it. I looked at the assessed valuation of that lot for 1923. It was $70,000. I don't know if it was for 1924.

Referring to Sheet 19, of Plaintiff's Exhibit 258, on which is shown Lot 1 of Block 3236, I visited that property for the purpose of this appraisal for the first time sometime in August or September, 1923, and the last time about t-o weeks ago, and several times between that. I have known the [fol. 981] property for years. I examined it and appraised it at the time that they bought it. That was about 1910, I think, or 1911. It may have been 1909. I did not have anything to do with the purchase of it at that time. I knew about the negotiations for it, because we were consulted in the matter both by the Charles D. Barney Estate and by the Consolidated Gas Company. I computed the area of the en-tire parcel for my own information, and I was given the com-putation that the engineers had worked out in the Gas Com-pany. The engineers worked out 464,866 square feet, if my recollection is right, and I have got to divide it up into lots, and I have not got the total number of lots apparently. There are about 185 lots, in the entire parcel.

The lay-out of the plot is as follows: It runs, the westerly

line, along the Harlem River Terrace; it faces on Harlem River Terrace. The New York Central Railroad tracks run on the westerly side of the Harlem River Terrace. Its southerly line is Landing Place and Fordham Road. The easterly line would be along Fordham Road and Sedgwick Avenue, to a place shown on this map at practically the junction of Sedgwick and Bailey Avenue, where Bailey Avenue branches off from Sedgewick and goes on down the hill.

Along Sedgwick Avenue it is on the level with Sedgwick Avenue and also along the frontage of Landing Road and Fordham Road it is practically on the level with it. It is [fol. 982] also on grade at Harlem River Terrace. Harlem River Terrace is considerably below Sedgwick Avenue, and this property slopes down very suddenly to Harlem River Terrace. I am referring to a topographical map that I have used at one time and another, of its topography. I do not know whether it is taken from the City's final maps. I do not know even where it came from. It is one we have had in the office and from sight it corresponds fairly well with my eyesight.

Physically it is hard to describe the width of Harlem River Terrace on the westerly end of the plot, because it is not paved along in there except just at the Landing Street, which runs in a little way. It is laid out as being sixty feet. The Landing Street is at the south end of it, it is more southwest. With reference to West Fordham Road, it runs from West Fordham Road down to Harlem River Terrace. The railroad tracks with reference to the westerly end of the plaintiff's line are right on the other side of the Harlem River Terrace. I suppose that the nearest track to the westerly line as laid out here of the Harlem River would be fifteen feet from the westerly line of Harlem River. I never measured it. The Harlem River Terrace is on grade there. It is not paved through there, but it is all on grade. It is a dirt road right straight through. I think that there are sewer manholes on Harlem River Terrace. It was awfully rutty when I went over it. I do not recall where they are on Harlem River Terrace, with refer- [fol. 983] ence to the plot. I did not pay any attention to see whether there were any manholes at all along Harlem

Terrace with reference to the plot itself, and I do not recall whether or not I saw any there.

The nearest crosstown street north of the easterly end of the plot is Kingsbridge Road. The streets do not run very regular there. Kingsbridge Road is the next great east and west thoroughfare. That street is about half a mile north of the easterly end of the plot. I should think. Hardly that, no. Approximately 1,800 feet as you follow Sedgwick Avenue. Physically there is no access to that street by way of Harlem River Terrace. Harlem River Terrace runs about to the end of this property; a little beyond it. As a matter of fact I turned around there and the time that I walked in through there I came up the steps. What it actually runs into, I suppose, would be Baily Avenue further down, but it is not a used street in there and it is not paved. Harlem River is at grade at West Fordham Road. I just want to say when I was talking about the Harlem River Terrace I was talking about the Harlem River Terrace opposite this property. Harlem River Terrace is a paved street to the south of this property. When I speak of Harlem River Terrace I mean Harlem River Terrace shown on the diagram sheet No. 19. All of my testimony has been on the condition of Harlem River Terrace along the face of this property.

In making up my valuation of the entire parcel, I have [fol. 984] considered many things, in connection with the use which might be made of the part that is vacant. As I say, I have been on this property several times appraising it, once before they took it, and Mr. Brown was then in charge of the appraisal Department in 1910, but I went up and visited the property and the other site above, which the gas company had bought. The use of that property in my mind would be manufacturing, freight, garages—any of those allied or businesses of that sort along the Harlem Terrace and along Sedgwick Avenue of residences and apartment houses, and along on Fordham Road, probably apartments houses with stores, and along Landing Road garages or manufacturing businesses.

Landing Road is not shown on this sheet 19. It is between West Fordham Road and Harlem River Terrace. It is at the southwesterly end of the property, and it runs into West Fordham Road. It runs off from West Fordham

Road. I am familiar with the city's final maps. There is the main road as you cross the bridge. When you cross the bridge, you come up along a hill here, and here is where all these garages are in here (indicating on map), and that is West Fordham Road. Here is West Fordham Road going along here, and here is Hampton Place right in there (indicating). I have always treated that as being Landing Road, this road here right next to and south of the property (indicating), and West Fordham Road, the main travel road over the bridge, as being the street further south from Landing Road.

[fol. 985] If I used the word "freight" as one of the uses for this plot it was in the general form of manufacturing, warehouse, garages, that sort of business. Any sort of manufacturing you want to put in there; whatever the purchaser would want to use it for – bottling plant, or anything else. In assuming that use, I did not give any consideration to the fact that the property could be used in conjunction with the railroad that operates there. If they had the right for a spur, or had a physical spur in that property, that property along in there would be in my opinion at least 30 per cent to 50 per cent more valuable. I did not give that as one of the considerations which determined my valuation. If I had I would have put a higher value on it. All along Harlem Terrace, South of Landing Road and Fordham Road, there is a line of commercial garages. Fordham station, of course, is right by Fordham Road and West Fordham Road and Harlem Terrace. Then there are garages, I think, almost entirely with the exception of the north side of Fordham Road, where there are some stores in there as well as garages. They even go and rent car space there. The Fordham station that I refer to is the Fordham station of the railroad there,—the New York Central & Hudson River.

In taking into consideration the valuation which I placed upon this plot, the best sale was the sale to the government of the hospital site practically diagonally across from the northerly end of this property. We appraised that and put values on that just before it was sold to the Government. That was the sale of the Orphan Asylum situated at [fol. 986] Sedgwick Avenue and running up to Kingsbridge Road. That was a plot that ran from the Webb Academy

and according to my figures it had about 527 lots in it. That sale went through in—November 28th the deed passed, 1921. I had nothing to do with the sale, except we advised some of the men interested in representing or—I don't know whether they represented the government in the sale, but they had a good deal to do with the say-so of it. I think that property is better than the Block 3236. I do not think its frontage on Sedgwick Avenue is particularly any better. I think that as a plot I would rather have it than this by a long shot. It sold for $2,750,000, I think. I got my information as to the price from Record and Guide. It is a government transaction and the consideration was stated. That was sold as a plot, together with the building. I don't know whether the government bought it as lots or acres, or how they bought it. Kingsbridge Road at the northerly end of that former Asylum property is on grade, with the property itself. The property itself is a little above Sedgwick Avenue. It goes up, you know. But just along Sedgwick Avenue it is approximately on grade. I think that there is a wall, if I remember rightly, a little low stone wall, and then it gradually goes up on a long terrace. The property runs over to Webb Avenue, which is the next street running east from Sedgwick Avenue. That is several hundred feet across; about a thousand feet, I would say, at its widest point. I should say the majority [fol. 987] of it was vacant land. There were two great brick buildings on it at the time of the sale, and also a large frame building. Those brick buildings were not old. It was a Roman Catholic Orphan Asylum. Almost all that property was an old estate. There was a large frame house on the property, and it is still on there now, or was the last time I went past there. I never counted the buildings on the old Roman Catholic Orphan Asylum property, but I think there were ten—a little further down near the gatehouse.

I took that sale into consideration as a guide or check on the valuation which I have given to Block 3236, only that it sold away above what our opinion was and verified my judgment that our units in that section were conservative. There were other recent sales in and along there. There were several sales in and along there of small pieces. The demand in there along Sedgwick Avenue is for residential

purposes, and Fordham, below. This property is a very fine residential section. University Avenue is, but I meant more detached dwellings along Sedgwick Avenue, and very much more like the Delafield improvement at Fieldstone. Fieldstone is considerably to the north, but I mean to say on irregular land, where people buy four or five lots and develop it more or less as a semi-country villa site. There has been a good deal of apartment house development on Sedgwick Avenue, beginning immediately [fol. 988] north of Kingsbridge Road, but there you get the topography that lends itself for that sort of building. This plot can be well used for that very same purpose along Sedgwick Avenue. Take the same development that has gone along on Haven Avenue in New York City, where they have built those apartments on drops of 60 and 70 and 80 feet. Paterno's castle up there on Northern Avenue and all in that section gives you a very good criterion of how you can utilize this property.

Other recent sales I took into consideration in arriving at my valuation are Fordham Road, north side, 99 feet east of Harlem River Terrace; 75 by 100, vacant. Sold in April, 1923, for $22,500. I had nothing to do with that sale. J. Clarence Davies sold it to Charles F. Rittel. I got my information as to the price from the Record and Guide, and that plot had an L running through to Harlem River Terrace. I cannot give you the block and lot numbers of that transaction because he sold the corner there or retained a part of the corner; evidently, of Harlem River Terrace and West Fordham, because this sale would cut into the lot numbers as laid out in my map. The block number is 3235.

Another recent sale was 2233 Sedgwick Avenue, 150 feet north of 182nd Street, runs west 76 feet 6 inches, north 66 feet 6 inches, east 79 feet 7 inches and south 50 feet 3 inches, being approximately 50 by 76 feet, on which there is a little two-story frame dwelling. That sold for $10,500. That just gave me an idea that the units that we used on Sedg- [fol. 989] wick Avenue of $2,500 and $3,000 were about correct. That was in 1920, and was a consideration stated in the deed.

The nearest sale that we have made in that section that I can recollect was further down on Sedgwick Avenue be-

low—well, it was just south of Burnside Avenue. I do not quote it as having any influence on my judgment. We have appraised a great deal of property in this section, and, of course, I know what price they paid for this property in 1910.

I made up my valuation of Block 3236 as follows: I got at it in two ways. A large plot of that sort is very difficult to appraise and put units on. Treating it as a whole, 185 lots at $1,500 a lot—would equal $277,000. That would be using good, bad and indifferent, bulking all the frontages. I do not think that that is far out of the way. Laying it out in plots, I checked that figure up, starting from the northerly end of the property and running along Sedgwick Avenue and running back 100 feet in depth. Giving them $2,500 a lot along Sedgwick Avenue for the first 300 feet, would be 12 lots, $30,000. The next 300 feet, working south along Sedgwick Avenue, I gave $2,000 a lot, working towards West Fordham Road. That made $24,000. Then the next 250 feet I gave $2,000 a lot. That is $20,000 additional. Then, according to my method, I skipped to the Harlem River Terrace frontage and there took the first 450 feet from the northerly line at $1,000 a lot and approximately [fol. 990] 150 feet in depth. That made $18,000. The next 400 feet along Harlem Terrace and running back 250 feet in depth I took at $1,500 a lot, making $24,000. Then I went back to Sedgwick Avenue to where I left off, starting approximately 850 feet from the northerly line on Sedgwick Avenue, and taking the next five lots at $3,000 a lot, making $15,000. Then swing around the curve, approximately 350 feet or 14 lots. On the curve it would measure a great deal more than that amount, but I took the next 14 lots on the curve of Fordham and Sedgwick at $4,000 a lot just at that corner. That is $56,000. Then the next 14 lots running down to Landing Road and Harlem Terrace, I took at $2,000 a lot. That was $28,000, and that left 12 lots of frontage on Harlem River and all the interior property situated back of the lines that I have drawn, and I put that all in at $52,000, and that brought up the total to $267,000.

That, as a matter of fact left fifty-nine lots. I have accounted for 126 so far in my calculations and the $52,000 covered twelve lots, 300 feet or more—about 325 or 350 feet of frontage on Harlem Terrace, 100 feet north of Land-

ing Road, and I would run those lots 200 feet back so that would be practically twenty-four lots, and that would leave [fol. 991] the thirty-five interior lots of land that has not been accounted for, and I put all those interior fifty-nine lots together with the frontage in at $52,000, making a total of $267,000, as a mathematical calculation, taking it that way.

My valuation was $250,000. I settled on $250,000 because it is an extremely hard property to appraise. They paid $250,000 back in 1910, and I think Bronx property has not gone back at all, and I think that naturally their being there is a detriment to the property, but I think we could sell it for more than $250,000, very easily.

Wherever my 100 feet stopped, I located those interior lots. That property is more than 200 feet in width from Sedgwick Avenue to Harlem Terrace, in many places. It is the difference between the depths I gave on Sedgwick Avenue or West Fordham Road and the depths I gave on Harlem River Terrace. There would be actually thirty-five interior lots. That is, assuming double depth on just that part of Harlem River Terrace. That left 300 feet, because they have the tennis courts on that flat land in there and it is a very developable piece. That last 300 feet going up to the northerly end of the plot starting in there just north of the holder. The holder lies in here (indicating)—well, north and west of the holder. I did not give any added value for corners or for plottage, because I have treated the whole thing as a whole, and if I laid out the [fol. 992] property in lots I got higher than I thought was a fair valuation for it. It is my opinion and as to the mathematical calculation I disregarded them. I did not add anything for size. I have appraised it just as I said, at $250,000, and that is what I think it is worth. I found the assessed valuation on the land for 1923 to be $200,000. I do not know what is was for 1924. I think that that assessment has been the same there for a long time.

As to sheet No. 20 of Plaintiff's Exhibit No. 258, I have taken all of the property shaded in blue on that diagram, and placed a valuation upon it as a whole, without any attempt to split up the various parcels and put a separate valuation on each parcel. I made up my valuation by using the unit of $13,000 per acre, which took on the water

front, back land and everything else. 180 acres all told. $13,000 came up to $2,340,000, and I thought it was worth $2,350,000. The question of $10,000 between $2,340,000 and $2,350,000, in a negotiation of that size, is infinitesimal, and I think men's minds, in talking over the table, do not quarrel on $10,000, and they fix $350,000 or $2,500,000 or $2,300,000 rather than to put $2,342,000, or some odd amount. I am trying to get at what I thought was the fair figure at which they could meet on, and I think it would be splitting hairs to put $2,340,000. I would rather put $2,350,000. I am speaking from the standpoint of both negotiators, the [fol. 993] prospective seller and purchaser. I do not think they would split hairs on $10,000 involving a deal of $2,000,000. That would not necessarily be assuming that the purchaser was very keen to get the property. Naturally he wants the property if he is negotiating for it.

The property was old farmland and there is an old dwelling and outbuildings standing on it. The surrounding property to the south of it is used for business and water fronts. To the west of it would be dwellings and business. As a matter of fact the nearest dwelling to this property is an Italian's house—a little white stucco house standing up in the middle of the wilderness. The business and water front property is south.

The nearest property to this is the Church F. Gates Lumber Company; that is very well developed. The Dollar Steamship Company owns part of this property, and then there lies in between that, north of Tiffany Street, about 80 acres of land on the water front, and we have it on our books for sale.

I gave added value to part of this property by reason of the fact that it had a water front. The water front, in my mind, makes it valuable. It is a very unique piece of property. I considered it as water front property in making up my valuation. I knew the price that they had paid for it, and I knew the price the Dollar people had paid at auction for part of this property. The Dollar Steamship Company bought part of the same tract. That part was the tract near Farragut Street, in the auction sale of 1919. [fol. 994] The Dollar Steamship Company do not do business in there at the water-front, at Farragut Street. I think that they just bought the land there. In 1919 they

bought a piece, it was plot A and B on the westerly side. Plot A and plot B, as marked out in the auction sale map, dated Tuesday, November 4, 1919, and it is on the west of Causeway Creek—that is all the Dollar Steamship Company. I take it back. It was not part of this property. It was a property immediately west of it. It lies right in here on that map (Indicating). It ran down to the waterfront. It is what would be west of Halleck's Street continued, as shown on this plate. Here is the exact line (indicating). It is the south end of Halleck Street continued to the river, and running from Ryaway Avenue. Ryaway Avenue is the street designated as the south end of Halleck Street. Halleck Street ends at what I call Ryaway Avenue, and this Dollar property runs from that street to the East River and south of Halleck Street continued to the river. Plot A contained 8.017 acres and Plot B contained 6.26 acres. Then it included land under water. That would be south of the plot from the bulkhead line, into the river, four acres of land under water.

Of the entire plot, shown on Sheet No. 20 which I have valued, no part of that land was under water. There are some low lands. I say "No," and I want to qualify that. Over on the easterly end, at the Bronx River, a marsh comes in and although it is not considered— it is back of the bulkhead and is not considered as land under water, because [fol. 995] it can be filled in. However, at times I suppose of high tides that land would be covered. The marsh does not extend so very far.

By the Master:

The Bronx River runs along this point, from where the East River is shown to East Bay Avenue continued. This is the Bronx River (indicating the top of Sheet No. 20).

By Mr. Donnelly:

On the easterly end there, approximately where East Bay Avenue, there is a piece of marsh land that runs in back of the old farm. It does not extend very far back. It comes in I should think about—of course, I did not survey it, about 400 feet, I should think. I am speaking of the marshy

land. There was no water when I was there, it was marshy land, and perhaps some little pools of water standing there, and some bullrushes growing in it. I do not think the ordinary high tide would come in there. There would not be an extension of the marshy condition by reason of the high tide. The property is not bulkheaded at that point. The bulkhead stops about here (indicating). There is a piece of lowland that runs back from the East River, but it is not marshy. It is lower here (indicating). Also probably from Ryaway. Taking it at the foot of Halleck Street there is a little jug at the southerly end of Halleck Street as shown on the blue print (indicating). Right in there there is lowland running in there, but I do not believe that you would call it marshy land there. I would just as leave walk over it. The East River begins on this diagram at the end of Halleck Street carried further south until it [fol. 996] reaches the bulkhead line. Then as far as the East River fronts on the property here, there is no marsh land now.

The property is all bulkhead, that strip there along the East River from Hunts Point Avenue to about the Bronx River. It runs in a northeasterly direction from the Hunts Point Avenue. This plot at the foot of Farragut Street and running westerly, that part is bulkheaded. The triangular piece between Farragut Street and Hunts Point Avenue is the highest part of the whole land. There is quite a knoll there and would give you plenty of earth to bring down and fill up any of the lowland. No part of it is bulkheaded there. South of the triangular piece there is a park running to the East River.

By the Master:

The East River front of the park is bulkheaded. That is the park reached by Hunts Point Avenue and Farragut Street, and it lies between the two. It is laid out as a city park and it is in the title of the city.

By Mr. Donnelly:

I have never sounded the depth of the East River as it is shown on the diagram. At the auction sale they had the property down as dredged to 21 feet of water. That is the

auction sale of all of this land, all of the waterfront. The advertisement is right here. It is an absolute auction sale. It is completely bulkheaded, "On which millions of dollars have been expended," to "21 feet of water." This [fol. 997] whole property was sold at auction in 1919, most of it. It was divided up into lots and plots and then all the interior land was sold in lots with laid out streets. The prices obtained at the auction sale in 1919 totaled $1,700,000. I think that is about what is was. "$2,584,190 realized for Bronx lots by Joseph P. Day at the three-day sale of lots in Hunts Point section in the Bronx, for the account of the Bronx Terminal Company and others. On Monday 222 lots were sold for the Estate of George F. Johnson and brought $501,000. The sale was split up among a great many buyers, an enormous number. I submit the Record and Guide of December 13, 1919, which gives some of the transfers of titles of the interior lots. I should judge that there were 200 or 250 individual purchasers. I think possibly some men may have purchased two or three lots, but the deeds, the titles, I think ran up over 250 at least.

The depth of water in the East River at this property which was valued was advertised as being 21 feet at the bulkhead, and the bulkhead was so constructed as to allow for 35 feet of water if desired. The channel in the Bronx River is of course out in the Sound, about 50 or 60 feet in depth. Right off the Bronx River, the East River Channel was to be dredged to a depth of 30 feet, and I think the Bronx River was to be at a less depth 18 or 20 feet at the mouth and then getting less as it went up. That is the Government layout. Personally, I would have said the depth of the Bronx River on which this property abuts, is 20 feet. [fol. 998] I have never sounded it and my knowledge is only from what the auction sale advertisement said, and my general knowledge, practical knowledge of the depth of water, looking at it and seeing boats come in there. After the first turn it is very much lower in depth. But they bring tugs and barges up the Bronx River. Burns Brothers have their coal yard farther up there and they bring in barges, and tugs go up the river as far as Lafayette Street, and as a matter of fact as far as the Northern Union Gas Company; I have seen scows go up there.

Those plots A and B that were purchased by the Dollar Steamship Company in 1918 were waterfront properties. It was bulkheaded and sold at auction. I had nothing to do with the sale, except that I was very much interested in it. The two plots sold for $250,000. I don't know what use is being made of the property. I don't think that they have developed that property to any great extent. It is vacant now, I think. They have put no buildings on it: that I know. The property, which I spoke of, further south was not a sale. It is for sale, and then also the Church E. Gates property, they have been trying to sell that. That was not a sale, though, that Church E. Gates property. We had it sold twice during the war and the Government would not let the deal go through. I do not think that would furnish any criterion here.

I know about the sale at auction of the property be- [fol. 999] longing to the East Bay Improvement Company in July, 1922. There they claimed 988 plots. That was all north, Leggett Avenue and Truxton Street, Oak Point Avenue and Viele Avenue, and ran over to Longfellow, easterly to Longfellow, Bryant, Faile. That is inland property and I would say northeast; in a general direction northeast of this property. It adjoins this property, the inside plots at certain places. I think it touches it. I mean on the northwest. That property does not touch this property actually, but it starts at Viele Avenue and runs northwest.

The City has laid out a block 200 by approximately 700 and given a block number to nine of such blocks. They have given one block number 2,775 assessment covers nine blocks. They take all the blocks north of Ryawa Avenue to Viele and west of Hunts Point Road and Payne Street, clean over to the East River, ten blocks of property, and give it all the same block number. The blocks run westerly until they meet the East River. None of the property that was sold runs over to the East River and none of it is waterfront at all. All of it is inside property. The southeast corner, or the northwest corner as I would put it, of Viele Avenue and Longfellow Avenue is the nearest point to the property in question, and then the property sold at that sale runs north and inland until it reaches back here to Randall Avenue, and then runs west along

Randall to Garrison, and then the greater majority of that [fol. 1000] property lies north and west of the most northerly and westerly side of the Consolidated property. The approximate distance between the nearest point on that property, and the property shown on the Diagram 20 is 840 feet. It runs inland, I should think, almost a mile.

This auction sale was a sale all by lots. The range of prices I would say was about $250 to possibly $500 a lot. Possibly they went higher than that, some of them. I have not got those individual lots. I have not got that in my head. I would have said off-hand that I thought they would probably average somewhere around $300 to $400 a lot. I have in my office, all that information, but, as I did not consider it of any help to me in arriving at this value, I disregarded it. It was not because it was an auction sale. That has a bearing, because there was an enormous number of lots sold on the market to the best bidders. That is one indication. It is a low value, I mean, it is the low limit of what the lots are going for. It was a Joseph P. Day sale. They had held this vacant property for some time and they just threw it on the market and sold it; closing out the East Bay Land & Improvement Company. It was July 9, 1922.

Referring to the property on sheet No. 20, that was put up at public auction and sold. That sale was by lots, and [fol. 1001] I have given the count of it from the Record and Guide. The total realized from the sale of those lots at public auction is made up by varying prices; that is, there was quite a range in prices there. Some of the property was sold, and of course the inland was sold as block and lot.

I have treated this valuation here as being one large plot without streets, except as shown on the map, Hunt's Point Avenue and Farragut Street, which is to be used and connected and the possibility of connection with the waterfront from all points of it. In other words, I consider it as waterfront property. The Dollar Steamship Company bought the waterfront property right immediately next to it.

The property shown on sheet No. 20, was sold at public auction. Plot F on the diagram of auction sale and starting from the easterly side of the foot of Hunt's Point

Road and running 640 feet along the bulkhead and running back 1,000 feet and then at an angle 460 feet until it reaches Farragut Street. Farragut Street extended. And then along Farragut Street and Hunt's Point Road down to the place and point of beginning. That property contained 10.76 acres and 5.90 acres. That was sold as one plot. At the auction making a total of approximately 16½ acres. That sold for $320,525, which equals $19,234 per acre.

[fol. 1002] The other two pieces were bid in at the auction there by the owners. At the time that the auction went on, they did not know that that was the fact, and then they stopped selling the waterfront. To put waterfront up at auction is, in my opinion, suicidal. I do not regard that auction sale, taken as a whole, as a fair criterion of values here. I think the prices were very extremely low. I think that price for the acreage was extremely low also. Those were the two pieces that were sold at public auction. I think a man named Kahn made the purchase there.

I know of the Dickey Estate sale very well, and that was in September, 1921. I appraised it for the estate in 1920, and knew all about the sale of it. That property in relation to the property shown on sheet No. 20, lies north—I would say directly north from this property, at the junction of Lafayette Street and Hunt's Point Road. It runs down easterly to the Bronx River and included Mr. Dickey's house, two gardeners' houses, gate lodge, stable. It was about 24 acres. That was sold at public auction by Joseph P. Day. It had altogether about a little over 1,000 feet, I think, of waterfront on the Bronx River. It was not bulkheaded, however, and all the land between it and practically the foot of his garden was extremely swampy, from Whitter Avenue east, running along pretty nearly half the property. There was also some question of title as to Edgewater Road, and it was a very irregular piece of land. The [fol. 1003] swamp con*con*dition went about a quarter of a mile, I would say, on the average from Bronx River.

The range of prices ran at Hunt's Point Road $3,000, I guess, a lot, and down to $250 in the swamp land there. Some gore lots at less. The total figure obtained for that property at the auction was $476,615. My appraisal was $417,317 of their entire property. It was a great mistake to sell that property at public auction sold as waterfront. The plot that was sold as a waterfront ran from the foot

of Spofford Street, if opened, along to Seneca Avenue. Now, that would be about 1,300 feet of waterfront. They were sold in separate parcels and they hardly brought anything. I have never figured it up exactly, because they sold plots in there of 116 by 91, and sold them off as building lots along Spofford Avenue and Edgewater Road, and then what was interior land they sold off with practically little or no frontage on any of the streets as waterfront. That waterfront was not developed, and it is very hard to say what was sold as waterfront and what was not.

There were two pieces in there that could be used as a criterion. 150 feet of water-front along the Bronx River for $3,600, and they were 500 feet deep. I don't know the name of the person who bought those. No use has been made of it since the purchase. It was marsh—it was not even bulkheaded. The Bronx River has not been straightened out there appreciably, and it was absolutely undeveloped marsh land that not many years ago was good snipe shooting and duck shooting. The marsh land is capable [fol. 1004] of being filled in, but you have not got much. Selling it out as blocks took away all the advantage of owning the high land in the back there to fill in your marsh. I would say it was about a mile or a mile and a half up the Bronx River from that particular piece of waterfront—an entirely different proposition.

Referring to sheet No. 20, there are only two regulated and graded streets—Hunts Point Avenue and Farragut Street. They are regulated and Hunts Point Avenue is graded. Farragut Street is not graded. You have got to go over quite a little mound to get up on Farragut Street, and wagon tracks that I would not say were Farragut Street or not, because there is no demarkation of it. Hunts Points Road is fairly well marked. It is not paved. It is apparently on grade. You go up from Hunts Point Road to come out at Farragut Street. You go up quite a little mound and then you drive along that mound. As Farragut Street is laid out on this map, I would not swear that I know where it is. Farragut Street as driven is as I described it. The physical condition is that Farragut Street, as Farragut Street, I do not think is marked out on the land so that you could find it. I think you would have to be a surveyor and get link and chain.

There is a sewer through Hunts Point Avenue—in fact, I am quite sure there is a sewer running down Hunts Point Avenue; certainly as far as East Bay Street. (Witness referred to map.) That is sewered, I think, its entire length there. Halleck Street is only a map street.
[fol. 1005] All the rest of the streets in there are nothing but map streets. You can not get off Hunts Point Road except through a little lane that drives in here to that old house that stands up on the point. You cannot drive along East Bay Avenue there, that is only a map street, too. East Bay Avenue is not any road at all. It just goes through land. I could not identify it. There were some stakes there and a garage facing on Hunts Point Road, and I asked the man at the garage there whether he knew where East Bay Avenue was and he said yes, and he walked up here and he pointed out an imaginary line as far as I could make out along the ground. I do not know whether the city has adopted any grade for Hunts Point Avenue, but it is a dirt road there and after you have passed East Bay Road, well, I can tell you just where the road starts in (witness referred to map). At Randall Avenue, the Belgian pavements stop practically. That is about 1,500 or 1,600 feet far away. That is, from the nearest point of this property. I was told about the purchase of this Hunts Point tract by the plaintiff company. I think Mr. Aldrich was part of my information, and somebody in Mr. Thomas' office also. I think Mr. Thomas was away at the time and I think the letter was signed by his secretary. My information as to the price at which the company bought it was that they had collected all these different parcels and it cost them—I think it was $2,250,000. I do not think that they [fol. 1006] actually know themselves just what it cost them, because there are so many little deeds in there. I mean that I think it is very hard to include all the little deeds and expenses at the time that they gave me the final figure. They gave me a figure of approximately $2,250,000.

I could not give you the assessed valuation of the land for 1923, because the assessed values are in all kinds of things and gross and, as it was not of any interest to me, I gave it up. I did not determine, as a result of my examination, what the property has been assessed for. I tried to and it was very complicated. I did not examine any of

the big parcels included in this tract for the purpose of ascertaining what they had been assessed for because, as I say, the assessed value is of very little interest to me, on any piece. I could go ahead and appraise perfectly without the assessed value. I did examine the assessed valuations for the purpose of using them as some sort of a check on my judgment, because I find that that is one of the questions that most lawyers ask in cross examination: What is the assessed value of it, and so I try to prepare myself as best I can to accommodate them. In this case I could not.

Referring to Block 1456, Lot 17, shown on the diagram on Plaintiff's Exhibit No. 264, to which I gave a value of $205,000, I made up that valuation by using a unit on Avenue A of $11,000 and on 61st Street and 62nd Street of [fol. 1007] $8,000. I gave the two corners 40 per cent each and I gave size 15 per cent, making a total of $205,395. I found the assessed valuation on the land in 1923 to be $161,000; I have not got 1924.

By the Master:

I gave the two corners 40 per cent for each corner and then I added 15 per cent on size for the whole. As to the 1924 assessment, I do not think that they have changed the assessment.

By Mr. Donnelly:

In reference to my unit of $11,000 for avenue lots as compared with $8,000 for 61st and 62nd Street, I considered the Avenue A lots more valuable and that is proved by the sale of the 60th and 61st Streets which I gave.

In making up valuation of Lot 17 of Block 1457, I used the same units on Avenue A of $11,000 and on 62nd Street and 63rd Street of $8,000. I gave 40 per cent, for corners in each case on that block and 15 per cent for size. That came up to a total of $196,379, and I said I thought it was worth $196,000. The area of Lot 17 of Block 1456 is somewhat less than the area of Lot 17 of Block 1457. If the two parcels were of the same area, I would give the same value approximately to each. The assessed valuation of Lot 17 of Block 1457 for 1923 was $160,000. I have not got it for 1924.

Referring to Lot 1 of Block 1475, on the same exhibit No. 264, I made up my valuation there by using the avenue unit of $11,000 and one corner 40 per cent, and 10 per cent for size, and that amounted to $52,374, and I said $52,000. The assessed valuation for 1923 was $30,000. This applies to [fol. 1008] the land only. That property appears to have a frontage of 89.22 feet on 62nd Street. I give 10 per cent for size. The same sales that I gave with reference to Lot 6 applies here likewise.

By the Master:

This river lot has no frontage. The piece next door to it has river frontage. I think that the City have ownership of the strip between this block, Lot 1, and the river. There is a strip of land in there or an ownership in there, and I think it is the city. It has no river frontage.

By Mr. Donnelly:

That strip alongside in the rear of it is vacant, to the east of it. I took off 2 per cent, if you are trying to work out those units, on account of its short depth. There is an average depth there of 95 feet instead of 100 feet, so I took off 2 per cent on my calculation on account of its depth. I considered that it fronted on Avenue A. Then the depth is represented by the figures 89.22 on the southerly side and 101.62 on the northerly side. There is a building standing on that property and it faces on Avenue A and naturally has a side on 62nd Street. There were some coal yards on the river front there on the plot marked in blue, just north of this piece of property and Burns Brothers has his coal yards in there. South of it is sand and building material. By the part marked blue, I mean Lots 15 to 19, both inclusive. The building material is McCarthy's in there, I think. Sand and building material, to the south, that would be between 61st and 62nd Streets, and then from 60th to 61st Streets; those two blocks in there—there is no im- [fol. 1009] portant buildings on them. There are all small buildings. There is a little brick building on 60th or 61st Street. That is all there is between the easterly side of this Lot 1 and the river—that vacant strip I spoke about. Burns Brothers' building may have extended down and over the

property to the east of that between the gas lot and the river, but he occupies, he did not own—the lot marked in blue, and I rather think that some of his structures did extend south of that, between the lot marked in red and the river, but there is nothing of importance in there. There is no structure of importance. I did not consider this lot as having any water front value. I gave it the avenue value.

In connection with those three lots—Lot 1 of Block 1475, Lot 17 of Block 1457, and Lot 17 of Block 1456 in the foregoing figures, there is not included any allowance for the additional element of conjunctive element where the company owns more than one block adjoining. There is, however, an additional value for the ownership of more than one block adjoining, where the purposes for which the property is to be used required a space greater than a block. By that I mean to say I have given only plottage for the size plot standing within the four streets. Now, the ownership and use of adjoining lots is a decided value in my mind. Just what that value is is hard for any appraiser to put. There is no question in my mind that there is an additional value for the ownership of more than one block [fol. 1010] adjoining. I mean the ownership of an entire block, bounded by the four streets and any additional property on the block surrounding it. I think that circumstance is an added value to the respective lots. There is no question in my mind as to that. That would not necessarily apply as to this particular space in question. They are less than a block, both of them. The statement I made was a general statement of all the properties of the gas company, where they own and control more than one block adjoining, and was put in on these sales to apply to all the blocks. That is what is called as conjunctive value. Take Lot 1 of Block 1475, I have said I have not added value to that lot because of the fact that the same owner owns Lot No. 17 of Block 1457, across the way. The same situation would apply to the two lots 17 in Blocks 1456 and 1457, and they are appraised as I have put it here. There is no conjunctive value in this appraisal at all. I do say that there is however, an additional value for an ownership with more than one block adjoining. That would apply to Plate 2—22nd Street, and plate 6, Plate 12, Plate 13 and 14. As to the properties shown on these plates I

have referred to, I did not give them a conjunctive value, although there is a conjunctive value. In other words, that consideration is not reflected in the valuations I have given here. In all these cases where I said there is a conjunctive [fol. 1011] value, the properties are separated by public streets. The city has been known to close the streets, but even where the streets are open, I think there is a conjunctive value. I have not added in the above figures any value where the company owns more than one block adjoining for conjunctive value. There is no question in my mind that there is additional value for the ownership of more than one block adjoining for such purposes as need a space greater than a block, and there is more than a special demand for such space in New York as shown by the following: The Hudson Tube Terminal, at 30 and 50 Church Street; that could not be there if it did not own the two blocks adjoining. The Municipal Building over Chambers Street; that could not be where it is unless it had the two blocks adjoining and the street running under it. The New York County Court House and the surrounding park. Wanamaker's Store. The Pennsylvania Rail-Road Terminal at Seventh to Eighth Avenues and 31st to 33rd Streets. The New York Central Terminal at 42nd Street and Park Avenue and their collection of blocks throughout the city, their freight yards in the West 30's and other places all the way up the North River. The Subway at 148 to 149th Street and Lenox Avenue. The Manhattan Railway Yards at 154th to 164th Streets at Eighth Avenue. The different gas companies and electric light companies and parks. [fol. 1012] Large packing houses such as Swift and Wilson over on West 42nd Street and the East River. The National Biscuit Company, which is Ninth Avenue and 15th Street. The Faber Pencil Company, 14th Street to Avenue D, The Rockefeller Foundation running from 64th Street to 68th Street. Hospitals, colleges and other demands. That additional value is dependent, in my opinion, upon the individual cases as certain users can pay more than others, and their individual problems are such that only they themselves can give an intelligent answer. That is why I have not, in these cases, attempted to put any conjunctive value on those plots. For instance, the Pennsylvania Railroad bought their property in an inexpensive neighborhood

and the four blocks cost them, say, $6,000,000 more or less. The New York Central, when they extended, had to buy in a very expensive section of the city. Their purchase, we will say, cost them $30,000,000. If it were a question of being located in New York and having a New York City terminal, the Pennsylvania Railroad probably would not have hesitated to pay 100 per cent or even 200 per cent more than the price they did pay, to control the sites they required, but just at what price they would have said we can go no further, they can only say. My experience in the acquiring of these plots is that they cost anywhere from 25 per cent to 100 per cent more to acquire than the sum of the land values of their integral lots.

[fol. 1013] The conjunctive values in those instances which I have just made applies to the properties themselves for their purposes, and it does not necessarily run with the land. Ownership or control of the ownership certainly carries along with it a conjunctive value. If those properties should be sold in separate values, they would lose their conjunctive value.

In so far as the Municipal Building is concerned, the public authorities, of course, had the right to close Chambers Street, but it would have been such a crime really to the public to close an important street like Chambers Street—they drive under it, but they could not have access by vehicular and pedestrian traffic across that street, unless they owned the block on each side.

By the Master:

That is, they could not have built over the street except by owning the adjoining blocks. In that instance of the Municipal Building, the same thing holds true of the County Court House, that the city was in an easier position to accomplish that purpose than a private individual would be. Of course they have the right of condemnation. They control the streets, but the use of them is the same. This so-called conjunctive right is one that would vary greatly, [fol. 1014] depending upon the use to which the owners of the blocks desired to put the property, and that there is no approximate basis that I can say it added any certain value of so much percentage or otherwise, and that is the reason I have not given any value in the estimates made. I think

the railroad can pay a great deal more than Wanamaker. Wanamaker could not afford to pay more than a certain sum for the conjunctive value of the two blocks.

By Mr. Donnelly:

There was a statute passed closing the streets, in order to enable the Pennsylvania to go on with its project. They paid the city for the closed streets in addition. And in that instance there, what they paid for the streets represented actual value, but what I mean is they would not have hesitated a minute, in my mind, if we had not been able to deliver to them those four blocks at, we will say, around six millions of dollars—if we had gone to them and said, "Here, we cannot deliver those blocks for twelve millions of dollars," the competition of having a railroad terminal in New York City, in competition with the New York Central—there is no question in my mind that they would have said, "Go ahead and buy the blocks and pay twelve millions for them instead of six millions; double the figure." Just at what point they would have said, "Well, our terminal is going to cost us too much; we cannot go into New York City," I don't know. They could only answer that. [fol. 1015] In those instances that I have given where I say that there is an additional value for the ownership of more than one block adjoining, and so forth, it is a fact that none of those streets has been closed by the public authorities. The streets were all open and were public travel streets; in those cases to which my attention was directed. That is the case with Chambers Street, Church Street, Cortlandt and Fulton and all those streets, Dey and underneath.

The mere fact that the gas company—if they could not control, we will say, in 20th Street and did not own the block north or south of it, but had to go two blocks or three blocks north or south, that would mean that they would have to join their holders with piping, tear up the streets; just what that would cost, I don't know, because I am not a gas manufacturer, but I would not be at all surprised to see the ownership—the difference between owning a block immediate next and two or three blocks away would run into several hundred thousand dollars.

Take Columbia College there. They have closed some streets, but their ownership and their buildings are entirely

separate parcels. Now, they could not have those buildings at 110th Street or at 135th Street. They must have them within easy reach and they have paid notably very high prices for the properties that they had to control and purchase since their original purchase. The same way with the Rockefeller Institute. They have purchased that block from Ehret that I spoke about the other day. They would [fol. 1016] not have touched it if that had been up in 72nd Street or down in 59th Street. So I say that the conjunctive value would exist even though the ownership of the street that separates the blocks is in the public.

The city has closed streets. That fact is I sold that plot to the Theological Seminary, between 120th to 122nd Street and Broadway, 121st Street was laid out in the city maps to be opened—as being opened; it was not physically opened; and the Theological Seminary was able to have that stricken off the map and had full control of the two blocks, from 120th to 122nd Street. The street was never opened. It was on the map, however, as opened. The fee—they did not condemn the fee. The effect of that, however, was to have the street effectually closed. It was open when they purchased the property, but closed afterwards, so as to exclude the public from any use of the street. It is a perfectly established fact that the city will close streets and shut off the public from use, the same way as the New York Central there.

As a matter of fact, they did close one street, for these very properties that we are talking about. They closed Avenue B there from 20th to 21st Streets. That is one of the blocks where there is conjunctive value. Avenue B from 20th to 21st Streets was physically closed up to within two years ago. That was not a street closing proceeding. There was some question as to its ever having been opened.

By the Master:

The city gave permits for an overhead connection between lots that are not public streets in Wanamaker's case. [fol. 1017] They give underground permits in many cases too. There is the possibility that the city might permit either underground or overhead connection between the blocks across the public streets. With conjunctive value,

it is certainly within possibility of arranging for that. As a matter of fact, they did that in this very case. The possibility of procuring that authority from the city is one of the elements that enters into my conjunctive value. The conjunctive value, as I have stated, is fixed in my mind by the saving that the particular company using that property is able to effect by the ownership of the adjoining blocks. They would have a value of that kind, irrespective of whether they had any physical connection either by overhead or underground structures between the two blocks. The proximity is of value, and that would be added, of course, where the streets were closed off from the public use.

Now, there is another place on the Mutual Gas plot of 12th Street. 12th Street is closed off there from Avenue D to the river and is in physical use by the gas company.

By Mr. Donnelly:

Some of those overhead or underground permits are revocable permits, and some are not. I think they used to be given as permanent easements, and generally speaking, I think from now on the city is very careful about giving the franchises easily. In some cases they have to lease—I mean you could not revoke the Pennsylvania's franchise of going under the streets. These permits for overhead access to buildings which are on adjoining blocks I think [fol. 1018] that those are probably revocable. The gas company has now got a tunnel or something underneath Marginal Street at 20th Street which is a travel street, at 99th Street, overhead and 11th Street, too. I assume they are revocable permits. I have given no added values in my appraisals for any of those conveniences, so that I think they ought to be considered.

As to Lot 16, Block 989, I used $7,000 on both 15th and 16th Streets, and I gave them 10 per cent for size, making $135,846, and I called the land $136,000. The same sales and the same everything that I have said and testified to in regard to the blue lot (Lot 1 of Block 989) holds good on this lot. The land to the east of Lot 16 is the Willard Parker Hospital. The assessed valuation on the land on Lot 16 for 1923 was $106,000. I haven't it for 1924. I think it is exactly the same. I said "No" to the 1924 assessments right straight along. Those were told to me.

I think the gas company gave them to me, but I did not put them down and I did not pay any attention to them; but my impression is that there was no change in there.

Sheet No. 21 of Plaintiff's Exhibit 259, which is the Astoria property, is a large tract of ground altogether. I have it divided up in my valutions because the map given me by the gas company divides it so. I have appraised all the blocks separately in all the cases, where they were divided by streets, whether open or not.

I valued Block 1682, Lots 8 and 11 as separate blocks, every one of them. Lots 8 and 11 of Block 1682 I took [fol. 1019] that as a whole. They were laid out in separate lots, and it says so, (indicating on map) but I thought possibly they were laid out in even lots; but I do not believe they are.

I visited the Astoria property for the purpose of making this appraisal August, 1923. I made more than one visit personally for the purpose of making my appraisal. The last time I was over there was about a month ago, I think. There were more than a half dozen visits made at different parts of the property. In other words, all the figures are mine. Figures and multiplications, I think, are mine. They were checked up without any aid or asistance from any of my associates. I was familiar with the property prior to the time that I visited it for the purpose of making this appraisal, of this identical property. I appraised it, I think, in 1919 or 1920, 1921, somewhere in there, the time I appraised the other gas companies' properties. I think we were interested in the sale of this property to the gas company.

This property lies on the northeasterly exterior of Astoria. It is surrounded on the north and east sides by the East River and Flushing Bay. Winthrop Avenue runs along the southerly side of Block 850, Lot 1. That is an open street and macadamed. To the south of that street, Van Alst Avenue is open, running southerly from Winthrop Avenue. It is open and macadamed. The Boulevard runs along the river front from Winthrop south—or south- [fol. 1020] westerly. Barclay Street is closed. Hallett Street is closed. Howland Street is closed. Crescent Street is closed. Merchant Street is closed. Goodrich

Street is closed. I say "closed"; it is not open. Chauncey Street is not open. Lawrence Street is open. De Bevois Avenue is closed, or Second Avenue; and Rapelje Avenue is closed. Blackwell Street is open. I say "open"; you can go down. Winthrop Avenue practically stops at Second Avenue or De Bois Avenue. Wolcott Avenue is opened and developed on the southerly, southwesterly side for several block fronts in there. The development there is one and two-family houses, and I think Merchant Street has some four-story buildings on it, more of an apartment house type.

When I speak of these streets being closed, I mean between Wolcott Avenue and Winthrop Avenue. They are only map streets, laid out on the map. That is to say, they were not streets that were opened and subsequently closed by reason of some proceeding on the part of the city. On Lawrence Street, they have several names for it, there is a line of little Italian shanties running from Wolcott to Winthrop, and then it rises up and there is quite a hill and above grade. All that property is above grade; runs, I should say, from 10 to 25 feet above the grade of Winthrop Avenue between Lawrence and Van Alst, and there it shades down and runs down practically on a level with Winthrop Avenue and Barclay Street, and there were two very nice houses on Block 894, residences. That used to be a very delightful place to live. On Wolcott Street the property [fols. 1021 & 1022] is practically on grade. It may have been two or three feet above at Chauncy, Goodrich and Merchant. Wolcott Avenue is a wide street,—80 feet; and so is Winthrop, 80. De Bevois is laid out 100 and also a question whether it is going to be laid out 150. Further down near the subway it is, I think 150 feet wide at De Bevois. The subway is southwesterly. The nearest station is at Ditmars Avenue, and that is the second street; two blocks away from Winthrop; one block away from Wolcott. De Bevois Avenue is laid out on the map from Ditmars to Winthrop, as 150 feet. Van Alst Avenue is 100 feet.

The other open streets are the Boulevard, and that, as physically opened, is not—in my opinion, it varies. It looks like an old country road right down along the water front, has a wall along the water front there, and it varies in width from, I should say, 50 feet down to 30 at Wolcott,

and as laid out on the City map, I suppose eventually it will be a 60 foot street. The boulevard is on the waterfront. There appears to be a block in there between those two blocks, that is land under water.

Block 850, Lot 1, is bulkheaded, except for a strip of approximately 900 feet on the East River, beginning at a point 875 feet northeasterly of Winthrop Ave., and from a strip on the north shore from about 1,800 feet from the northerly corner of the property to a point 600 feet westerly of Luyster Creek. I do not know as to the actual number of feet of the bulkhead at the East River front. I have assumed the dimensions of the map to be correct. I should say, as a rough guess, that along the East River there was about 5,200 feet of bulkhead.

[fol. 1023] On the westerly side, the water is very deep, and then I would say, knowing the river, I should think it was 40 or 50 feet in there—perhaps more. Then as you go along at the northeasterly side there is a shoal port in here. It is deep enough, however, to bring in scows and barges, and I have seen them tied up against the bulkheads there. Then when they get over to Luyster Creek, that I understand has been deepened out and the bulkhead along in there is a very fine bulkhead—along Luyster Creek and for the 600 feet running along Flushing Bay there, concrete and beautiful dock and bulkhead. The bulkhead does not extend along the entire length of Luyster Creek. It runs in straight southwest, and then runs into westerly—takes a turn in a westerly direction and stops about opposite the end of the Steinway property. The Steinway property does run a little further southwesterly than the end of the bulkhead. That would give the length of bulkhead along Luyster Creek of about 1,800 to 2,000 feet. Luyster Creek is not navigable down to Winthrop Avenue, I shouldn't judge. It is open and there is water there.. You probably could get up it at high tide with a rowboat up to very close to Winthrop Avenue.

The water along the bulkhead on Luyster Creek I understand has been dredged out, and I think that there is about 30 feet of water there. I would not swear to it. I have [fol. 1024] never put down any plumb lines. I was told, I think if I remember rightly, that there was about 30 feet of water. I asked one of the men there.

They have filled in a great deal of the property, Block 850, Lot 1. There is a little marsh land, low-land—well, it would lie in about the south center of the map there, just south of the center of Block 850. It is not covered with water, and there is no water running in there, but it was marsh. A great deal of it has been filled in, and there is, I think, some of it left still to be filled in. I think they use it as a dump there for the ashes and other things.

Now, in arriving at the valuations which I have given to the various parcels which make up this entire tract shown on Sheet No. 21, I think that the parcel 850 is in an entirely different category from the rest of the land. The whole parcel is pure and simple, in my mind, a waterfront proposition, whereas, the land south of Winthrop Avenue loans itself in my mind and has a value for residences. It adjoins and immediately opposite are residences on Wolcott Avenue. In making up my valuations of the blocks shown south of Winthrop Avenue to Wolcott Avenue, I assumed that one of the purposes to — they could be devoted, was for residential purposes or residential development. That is the basis on which I appraised the land value. In fact, it is property zoned to dwellings between Winthrop and Wolcott. I think it was zoned for dwelling purposes. The property south of Winthrop Avenue is not occupied in any way that I could see—that was all vacant land there.

[fol. 1025] As a matter of fact, the property all to the south of that has changed hands within the last four or five years. Great tracts have been purchased and developed by Louis Gold, Richard Finley and other builders in there, and a great number of little private dwellings have been put up. The entire block front from Lawrence Street to Chauncey and from Chauncey to Goodrich facing on Wolcott Street has been developed, buildings finished, completed and occupied now. Lawrence Street, Chauncey to Goodrich and Crescent to Hallett. Those two block fronts are all developed with one-family and two-family houses. Those houses are selling at $9,000 for a house. A house costs the builders somewhere in the neighborhood of about $5,600 to $6,000, and they sell them for about $9,000. The Plots are 20 feet by 100,—some of the corners there are 30 by 100. Oh, it is being improved all the time in there. I think they have all been sold along that frontage there.

Of course, that shows a lot unit there of $2,000, which is absurd. It is not worth it. When they bought it as vacant land they paid about $500 to $600 a lot.

I am speaking of properties that are south of Wolcott Avenue, but this general—I have used a unit of $500. I have used a unit higher than that on Wolcott Avenue, because that can be sold and developed—there is no grading practically to speak of on that frontage. I use my unit of $500 all the rest of the block. I am below the assessed value on all those properties. I used that unit of $500 as [fol. 1026] the entire unit value for all that land between Wolcott and Winthrop Avenues. On these parcels between Winthrop and Wolcott Avenues I think I am below the assessed valuations.

The method which I used in arriving at my valuation of Lot 1 of Block 849, would be typical of the rest of the blocks, except that the other blocks are 800 by 200. Lot 1 of Block 849 is irregular. It cuts through the middle of the block there and there I used a unit on Woolcott Avenue of $40 a front foot. There is an average there of 180 feet along Woolcott Avenue, and makes $7,200. I gave one corner 20 per cent and that equals $200. Along Chauncey Street there was 700 feet at $20 a front foot, which equals $14,000 and that left 12 interior lots, and I said I thought that those were worth about $2,600 as interior land, and gave the entire property $24,000, including the interior land and irregular shape. I gave them all $20 a front foot, which is the same as $500 a unit, and that left that little piece in there.

Lot 1, Block 859, immediately alongside of it is a block 800 by 200. I gave the Woolcott Avenue frontage of $40 a front foot, $8,000; two corners, 20 per cent, that is $400, and 56 lots at $500 a lot, $28,000—$36,400.

Lot 1 of Block 871 is the same as Block 859, 200 feet. It [fol. 1027] has the same frontage 200 by 800, as Block 881. I used different units on Wolcott Avenue in valuing Block 871 and Block 881 from my units in Block 859. I gave them a slightly better unit on Woolcott Avenue only and on rear lots, they went in at the same. I used those two units, Blocks 871 and 881 on Woolcott Avenue of $40 a front foot. I have the same units there, then and the same for Block 881 and Block 871.

As to Block 860 and Block 870, those two blocks have a frontage of 200 feet each. There I used the unit on Woolcott Avenue of $30 a front foot. The difference was for the simple reason that those two streets are not developed, opposite those blocks, and Woolcott Avenue is not as well paved and kept up, and I do not think they are as attractive. Woolcott Avenue now is not paved at all. Probably it, at one time or another, had macadam along it. Woolcott Avenue itself is not physically in as good condition as on other parts of the street. That is a regularly laid out and graded street. It is sewered along Woolcott Avenue. Those lots on this block have frontages on Winthrop Avenue. These blocks ran right straight through from Woolcott to Winthrop. It is about the same size as the Sixth and Seventh Avenue blocks in New York.

[fol. 1028] As to Block 882, that has a frontage of 300 feet. My unit there in making up my valuation on Woolcott Avenue was $30 a front foot, two corners 20 per cent and 56 lots at $500 a lot, making $37,300. Hallett Street is not open there, in the block between Woolcott and Winthrop. You could not get down from Hallett into Winthrop. You would fall off a precipice. Van Alst Avenue is an open street that is 100 feet wide. I do not think Van Alst Avenue is sewered between Woolcott and Winthrop.

I gave the units for Block 893. They are all $500 for the back lots and the only difference I gave was that frontage along Woolcott Avenue. The frontage of Block 893 on Woolcott Avenue is 300 feet. I have got a lot unit on that block 893, Van Alst and Barclay Street, all the way straight through—Woolcott Avenue, Van Alst Avenue and everything—of $500 a lot. There are 96 lots in that entire block, making $48,000, and I thought it was worth $50,000. I am not including Block 894. Barclay Street is not an open street.

Block 894 has a frontage on Woolcott Avenue of 461 feet. That takes up the rest of the block between Van Alst Avenue, Barclay Street and the Boulevard. I gave them $500 a lot straight through. That gave me a value of $85,000. The Boulevard street runs between it and the water. I did not value this as water front property.

By the Master:

I did not include in my valuation what would be the bed [fol. 1029] of these unopened streets. I do not know what the title of the fee in that street—in whose title the fee of that street lies. The city have laid them out as being open and in their possession on the map, and I have considered them as being owned by the city. If they are owned by the company, the fees there—why, I do not think that that would change my appraisal very much. I assumed in my appraisal that the title to these streets as laid out on the map is in the city. That is, when there was talk of putting structures there, which brought these structures in proximity to this residential district, then the streets were taken over, after the acquisition of the property by the Astoria people.

The Boulevard is not known as the Shore Road. That has always been the Boulevard. That is known as the Boulevard all the way down to Broadway, and then it becomes Vernon Avenue.

Block 895, Lot 1, is physically land under water. I figured there was approximately 128,000 square feet of land under water, and I gave that 25 cents a square foot, or $32,000.

I did not have any recent sales which acted as a guide in giving me that particular valuation of land under water. It is a value I have used and evidently the city uses a very much higher value, for they assess it at $42,000.

The assessed valuation of Lot 1 of Block 849 is $19,800. The assessed valuation for 1924 I understand was $25,000. The other assessed valuations are as follows: Block 859, Lot 1 is $44,000 for 1924, and $33,250 for 1923. Block 860 $44,000 for 1924 and $33,400 for 1923. Block 870, Lot 1, is [fol. 1030] $42,000 for all 1924, and $33,700 for 1923. Block 871, Lot 1 is $42,500 for 1924 and $34,000 for 1923. Block 881, Lot 1 is $44,500 for 1924 and $35,000 for 1923. Block 882, lot 1 is $45,000 for 1924 and $39,800 for 1923. Block 892, Lot 1 is $51,800 for 1924. Block 894, Lot 1 is $85,000 for 1923 and $91,000 for 1924. Block 895, Lot 1 is $42,500 for both years.

[fol. 1031] April 11, 1924.

Met pursuant to adjournment.

FRANCIS K. STEVENS, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination (continued) by Mr. Donnelly:

In making up the valuation of Block 850, Lot 1, on Sheet 21 of Plaintiff's Exhibit No. 259, I placed a value on the entire property of $13,000 an acre, 311.85 acres at $13,000 an acre equals $4,054,050, and I said I thought that was worth $4,000,000. I treated it all as one large plot of water front property. I valued it at $13,000 an acre, because any large acreage of that sort of water front property is treated in that manner. This is the same unit per acre that I took for the Hunts Point tract. I did not differentiate in my acreage because I saw that was the proper unit to use here.

The last sale made over in Astoria was property at the foot of Broadway that I personally owned an interest in, but that is not, in my mind, comparable to this property. There have been no sales of property that is comparable with this in size and situation, but probably the most comparable one would be the purchase by the Gas Company of the Hunt's Point tract. There is no other plot in the neighborhood of this plot that is similarly situated as to water front, bulkhead and size, and there have been no recent sales of water front property in this neighborhood because south of this property comes in the Park water front and you do not strike any good water fronts until you get down around the 92nd Street Ferry.

There are two other places of business in this neighborhood—the Steinway Piano Factory across Luyster Creek [fol. 1032] and the Oakes Dye Works, who also own part of that water front right opposite on Luyster Creek. I looked up this property and found it was assessed for the — 1923 as being 267.44 acres of upland and twenty-six acres of land under water at $2,500,000. I find they raised it to $3,000,000 in 1924, for the same acreage.

By the Master:

I did not differentiate between upland and land under water. I took the entire acreage of 311.85, good, bad and indifferent as being worth $13,000 an acre. You take the land over at Hunts Point, some of that land is lower than others, and this land under water is being filled in rapidly. The fact is, since 1919, I was told by the Gas Company that they had already filled in 5¾ acres. The assessed value as to the land under water and upland, the amounts were not changed from 1919 to 1923 under the assessed value as given in the assessed value book.

[fol. 1033] By Mr. Donnelly:

The land under water at the assessed value used by the city on Block 895, equals $14,455 per acre, but that is a small piece and its greatest depth from the eastern side of the Boulevard is not over 212.59, and on the south side is only 120 feet. It lies about two feet under water along the Boulevard for most of it and out at the outer end it is very close to the channel, which is 40 feet deep, or more. Therefore, it would take a considerable amount of filling to make that upland property. Figuring the 26 acres as they claim as land under water at $14,400 per acre would be $374,400. Now, to fill in Block 895 would take approximately 24,200 cubic yards *cubic yards*. I assumed the average depth to be filled in would come to about 15 feet from the bottom to raise it up to upland. Putting that fill in at 25 cents a cubic yard, which was what it cost me to fill in our land at Broadway in 1910—and probably would cost considerably more today, even double—would equal $6,050 an acre. Add that to $14,400 an acre, would make $20,000 an acre. I figured that, running back a line of 600 feet from your water front in depth, there was approximately 113 acres of this piece of property situated immediately adjoining the water front, and I called it water front property. Add $20,000 an acre, that brought it to $2,460,000, and that left me 172.85 acres of upland and interior land, upon which I [fol. 1034] put a unit of 23 cents a square foot, which is the square foot value that the city has assessed Block 894, immediately adjoin*t*ing 895, but which is not connected with it because a street runs in between it cutting off its full use

with the water front, to say the least. Twenty-three cents a square foot equals approximately $10,000 an acre, or $1,278,500 for the upland that was left over. The total of those sums amount to $4,362,900, using the city units as they have used them on small pieces of property in that location.

Those are not my methods,—I treated it as a whole, at $13,000 an acre, but it showed me that, using the city's units in there, brought them above my figure and that justified me and explained to me, to my satisfaction, why my figure in this case was above the city, whereas I was much below them on the appraisals of this upland. That was what was worrying me when I reached the sum of $4,000,000 and I felt that that was the fair market value and reasonable value of the property.

I cannot tell you where the so-called land under water is, because I haven't the assessors' maps, but I would assume that it would be the piece that I described which was not bulkheaded along the East River on the westerly side. That would be part of where the 26 acres of land under water lie, but there is also a basin which they have dug out and dredged along the northerly side of the frontage on East River and shown on the exhibit and map there.

I found that the assessors had not included in their assessment about 18 acres. They did not give the boundaries [fol. 1035] of the 293.44 acres included in the assessment, but described it as Block 850, Lot 1. I did not look at the tax maps to see what was included in that. If the assessors had included this 18 acres and some odd, which they say that the- apparaently excluded, their assessed valuation would have been $2,657,250 in 1923 and $3,203,500 in 1924. It is figured as follows: They have put a total assessment for 1923 of $2,500,000 for 293.44 acres, which equals $8,500 an acre. The assessment for 1923, of three millions of dollars would make that acreage approximately $11,000 an acre. Multiplying 18 and approximately a half acre by $8,500 would bring the assessed value as above.

That is not the fair way of getting at it, because the land that they left out, in my mind is upland, which they have not considered, and certainly where they differentiate between land under water and upland in their description of it, they must differentiate in their unit of it, but any unit

of it that they ever used on this entire piece they repudiate in their units of Blocks 895 and 894,—which I have shown you, using those units—which are much less desirable properties in my estimation compared to this piece here—would bring it up to $4,362,900. I made no unit for upland. I took the whole thing, as a whole, at $13,000 an acre. This entire property could be devoted for any purpose desiring a plot of that size. For illustration, George F. Johnson himself personally acquired Hunt's Point property for a large terminal. We at one time were looking around for the New York-New Haven for a large terminal; the New York Central in the last two years was considering a large terminal in this general section—in fact a little bit south [fol. 1036] of this—and we were dickering with them on several pieces.

By the Master:

Using the same units I used on Block 895 for land under water and Block 894 for upland, the 26 acres of land under water would equal $283,140 at 25 cents a foot, which is the figure I put on the land under water in Block 895.

That 113 acres of water front land, if I put water front value on it, is extraordinarily high. Putting it in there at 50 cents a square foot, which is double the land under water or my figure on the land under water, and one-third of what I got for my property per square foot at the foot of Broadway, brings it up to $21,000 an acre, which would be $2,373,000. The 172 acres of interior land at $500 a lot equals $8,712 an acre or call it $8,700 an acre, $1,470,500. The three items as covered in my computation showing the value of the City unit, as a check to my value, 26 acres of land under water, $283,140, water front 113 acres at $21,000 an acre would be $2,373,000, and 172.85, which I called 173 acres, at $8,500 an acre, equals $1,470,500. Footing those up, $4,126,640.

The City's unit based on Block 895 was $14,455 per acre; my unit for that plot was twenty-five cents a square foot or $10,890 per acre. Their unit on Block 894 is twenty-three cents per square foot against my unit of twenty cents a square foot, or $10,000 an acre, compared to my unit of $8,700 an acre. Using the same form of units as in giving

the City's total of $4,300,000, based on those blocks, the 113 acres of water front in my calculation shows the City's values to be $20,000 an acre. In my calculation just now, as I had not fixed any unit for that land, I used $21,000 per acre; but using the same unit, fixed in the same way that I have fixed it for the City, and putting in the same cost of [fol. 1037] fill namely, twenty-five cents per cubic yard would be $6,050, and that would give me an acreage value for the waterfront of $16,840, and multiplying that by 113, showed the City unit as $20,000 per acre and my own $16,840. That would be $1,902,920 and the sum of those three figures would be $3,656,560, not including plottage or size. Those are the two figures I got in checking the $4,000,000 valuation, one based on the City's assessment of these two blocks and one based on my valuation, and adopting the same methods of computation and the same areas.

By Mr. Ransom:

The valuation of Block 1978, Lot 37, unimproved as of June 1, 1923, as described in Exhibit 265 in this case, is $127,500. The units which I used in that computation $15,000 on 123rd Street and $14,000 on 124th Street. This plot has 100 feet frontage on each street by full width of the [fol. 1038] block. I added ten per cent there, making a total of $127,600, which I said I thought was worth $127,500.

By Mr. Donnelly:

I used the higher unit on 123rd Street, as 123rd Street is slightly better than 124th, for there is a distinct falling off in value as you get away from 122nd Street, go north, going down to 125th Street and getting into the business sections, because it is not as high class a street.

Both are 60 foot streets. I would rather have a frontage on 123rd Street than on 124th Street. The cream of that section, of course, is around 122nd and Columbia Heights, and then as you go down toward 125th Street, the desirability and the class of tenants is not to my mind quite so good. The two streets are developed about the same structurally, but I think you could probably get slightly better rentals and a better class of tenants on 123rd Street.

In 1922 we had sales on 123rd and 122nd Streets between Amsterdam and Broadway, 150 feet frontage on 122nd and 123rd Street. The 122nd Street parcel sold for $120,000 for six lots and the 123rd Street parcel sold for $111,000. The 122nd Street parcel was assessed for $102,000 and the 123rd at $85,000. In my mind those are the most pertinent sales of vacant land.

[fol. 1039] The assessed value on Block 1978, Lot 37, for 1923 is $125,000.

Cross-examination by Mr. Chamberlain:

With regard to lot 35 of Block 951, I do not think a tenement built on that land would pay a fair return on the cost of the building and possibly any value on your land. I would place a value on that land for its best use in the neighborhood. Assuming it was bought for business purposes, I do not think its proximity to the gas plant would affect it at all.

Redirect examination by Mr. Ransom:

I think that the price at which the land now occupied by the Yankee Stadium was purchased is comparable with the market value of Block 2497, Lot 132. When that land was purchased, it was vacant land and the use *of* which it was purchased was not necessarily known, and the betterment of the Yankee Stadium coming in there was not an element of value because it had not bought the land.

They purchased two parcels there, in 1921 one a small corner, 50 by 97, situated on 161st Street and what was then called River Road, and is now the approach to Macomb's Dam Bridge, sold by William Bruno for $10,250, and the second extended from 161st Street to 157th Street and Cromwell Avenue, to within 320 feet north of Block 2497. There were 135 lots in those two sales which sold for $560,250 or $4,150 per lot. My unit was $3,000 per lot. The city took title in September 1923 to the land along the Harlem River and sometime before that they took title to the land to be occupied by the market. They have done work on the property for the market and there are some caissons and foundations on that land. They have closed 151st Street from Cromwell Avenue to Exterior Street.

With respect to the property on East 15th Street, shown on Diagram 4, called the General Office Building, at—I testi- [fol. 1040] fied at pages 2816-2817, of the mimeograph record, that I had not been in the Academy of Music for more than fifteen years. At that time, I did not have my office memorandum with me. The Fox Film Company have that under lease as a moving picture theatre, and pay a rental on that property at $71,400 per — until September 1932. The lease is required to pay the water charges and taxes and assessments in excess of $15,000 and make all necessary repairs.

With respect to the so-called Fordham holder property, shown on Deiagram 19, I appraised the Orphan Asylum property before its sale at $3,000 a lot all through, inland frontages — interior land and everything. We figured 527 lots. The sale price was $2,750,000 and our appraisal was $2,000,000. The City assessed the buildings at that time at a million dollars, which we thought was excessive on the building. We did not think the buildings were worth over $500,000. Taking a million dollars from the sale price of $2,750,000, would make the land $1,750,000. against our appraisal value of $1,500,000. The sale price per lot, assuming the buildings to the worth a million dollars, amounted to $3,320. as vacant land.

My units for this Fordham holder property, taking the whole property as it is, good, bad and indifferent, is less than $1,500 per lot. With respect to the vacant Manhattan College property on Broadway and 132nd Street, I have [fol. 1041] since ascertained that the property was vacated within the last year by the removal of the college to Fieldstone, and although their buildings are not completed up there, they are holding their classes in their new place. I do not think that they have used this property at 132nd Street since last autumn.

Referring to the affidavit which I made on June 7, 1923, and which was submitted in support of the application for a temporary injunction in this case, the figures related only to certain parcels of land belonging to the Consolidated Gas Company, which were set out and listed in the affidavit. It did not include lands owned by the Astoria Company, nor the lands belonging to the New Amsterdam Company, and the Standard Company. The affidavit copied, in part,

in the record, as follows: "Among the parcels of land which I appraised are the following, which belong to the Consolidated Gas Company:

Block	Lot
368	1
369	1, 10 to 15
382	22
239	1, 5 and 7
870	47, 60
982	13
988	1
991	1 and 47
989	1
985	7, 19, 20, 39, 40
951	35
952	7, 29, 30, 35
953	1
978	5 and 6
979	1
987	37
[fol. 1042] 1089	1
1090	23
1092	7
1093	9
1028	38
1457	6
1157	1
1177	21
1670	1
1692	1
1682	8, 11
1683	18
1704	5
1712	2
1642	32, 33
1998	50, 53, 56
1999	1
2583	360
2108	23
3236	1

"In my opinion the market value of the land above described of the Consolidated Gas Company of New York, used in its gas business as of December 31, 1922, was not less than $13,166,981, and that the value thereof as of that date, or as of the present time, is at least that sum."

With respect to the Astoria properties, Block 850, Lot 1, the unit of $13,000 per acre which I used for the entire property included an allowance for size and plottage. In the two illustrative computations which I made this morning by way of comparison with the City's basis, I did not [fol. 1043] include any allowance for size or plottage. In carrying over units taken from small parcels, such as Lot 1 of Blocks 894 and 895 and applying them to a large property such as Block 850, an allowance of at least 10% would have to be made for size or plottage.

In all cases where I have appraised this property, as vacant land, I have appraised it for the uses allowed by the City under their Zoning Act, for similarly situated properties, as the property in question, and for any use that would be allowed under that zoning Law.

Recross-examination by Mr. Donnelly:

I did not accept the assessed value as representing fair market value for the reason that I found them so inaccurate, both as to the descriptions of the properties that they were assessing and also in connection with the sale values, that as a criterion of value I disregarded them.

There were some instances, however, where I agreed with the assessed valuations. The plottage is a very hard thing to describe. The location of the property has a great effect on the amount of plottage to be used. Appraisers in [1044] the Bronx divide the values up into so many lots and add practically nothing for plottage. I have not added any plottage in any of the appraisals that I have made there; nor did I in Long Island City. I took a $13,000 acreage unit which included size and everything. In Manhattan, the mode of comparison is to add size, and there I have added size.

I certainly believe that a large plot of land has a greater adaptability, a greater use, and a greater value than a small piece of land, regardless of location.

I would add something for plottage where the plot was entirely in a swamp. I have had a good deal of experience in the meadow land down around Far Rockway and Jamaica Bay. It would not pay to fill in an acre of land, whereas if you could collect 200 or 300 acres of land and get your pumping apparatus out into the ocean and pump your sand in and fill it in, the total expense is spread over 200 acres and is very little per acre, but it would be probibitive to do so on a single acre of land. In that case the plottage is worth a great deal of money.

There are 63.40 lots in block 2497. They would probably have to acquire more land for the same use as the Yankee Stadium. The subway is right alongside the Yankee Stadium. Block 2497 is about 800 feet southwest of the subway. With reference to Macombs Dam Bridge, you can either go down 153rd Street and then go right up on the approach, or you can go down around the Yankee Stadium and get on to it through Macombs Dam Bridge approach. [fol. 1045] If you were on the southwesterly side of the Stadium you would only be 200 feet nearer, or 320 feet near, in a direct line, either from the subway station or the Macombs Dam bridge approach. As a matter of fact, you can go right out on the edge of your property, which is on Exterior Street, at the railroad, and go right up Exterior Street right on to Jerome Avenue and go across the bridge at that point. It would only be from the westerly end of the Stadium; you would only be 320 feet from the nearest point at the Stadium—or 400 feet. The Stadium is much nearer the subway station than this property.

By Mr. Ransom:

I did not have my full data this morning and would like to correct testimony that I gave with reference to the Yankee Ball Park, with reference to the distances from Macombs bridge and its location to Exterior Street. The Yankee Stadium covers the property facing on River Avenue from East 165th Street to 157th Street and then runs northwesterly along 157th Street to a point practically in the center of old Block 2499. Then runs northeasterly to Doughty Street and thence along Doughty Street to East 161st Street and along East 161st Street to the corner of

River Avenue and 161st Street at the subway station there. The little corner that I testified to is situated right at that point of River Avenue and 161st Street and the rest of the property, which was acquired from the Farmers' Loan & Trust Company, covered all the rest of the property of old Blocks 2491, 2499, Lot 70; and approximately half of [fol. 1046] Block 2499, Lot 1. At its nearest point, the Yankee Stadium is about 80 feet away from the property owned by the Gas Company, and that point is the nearest point of the Yankee Stadium to the Macombs Dam Bridge. The property of the plaintiff is nearer to the Macombs Dam Bridge than the stadium.

By Mr. Donnelly:

As a result of this sale to the Yankee Stadium, Cromwell Avenue was closed from 157th Street to 161st Street and East 158th Street was closed from Doughty Street to Cromwell Avenue.

I received my information with reference to the rental of the moving picture house which occupies the Academy of Music from Mr. Day's office and the Fox Film people themselves.

Our appraisal of the Asylum property at Kingsbridge Road and Sedgwick Avenue was in 1921. I think it was three or four months before the Government took title. The Government was considering it at that time for the hospital and we were asked our opinions. The property comprised 527 lots and our appraisal was upon a lot valuation basis.

[fol. 1047] Robert Huntley, called as a witness on behalf of the plaintiff, being duly sworn, testified as follows:

Direct examination by Mr. Ransom:

I reside at Ridgewood, New Jersey. For the past twenty-one years I have been connected with the office of Joseph P. Day, 67 Liberty Street, as real estate broker and appraiser. This corporation carries on a general real estate business; real estate auctioneer, broker, appraiser. I have charge of all the appraisals in that office, but occasionally I

act as a broker or place a mortgage loan. I have appraised for the City of New York; for the State Comptroller; the U. S. Army Board; New York Central Railroad; New York, New Haven & Hartford Railroad; Erie Railroad Company; Pennsylvania Railroad; Delaware, Lackawanna & Western Railroad; Lehigh Valley Railroad; Central Railroad of New Jersey; Federal Shipbuilding Company; Ford Motor Company; United States Rubber Company; General Electric Company; General Chemical Company; National City Bank; Bankers' Trust Company; Guaranty Trust Company; Consolidated Gas Company; New York Edison Company; Sherman & Sterling, attorneys; Carter, Ledyard & Milburn; and a great many other attorneys.

I have testified in upwards of 350 cases involving the value of real estate. In the matter of acquiring land for the subways, I testified as to eight parcels on Center Street; also as to the parcel known as the Stevens House, at the corner of Broadway nad Morris Street, now the site of the Cunard Building; and a parcel on Williams Street, just south of Beekman Street; also in the Grand Union Hotel prop- [fol. 1048] erty, Park Avenue and 42nd Street. In certiorari proceedings I represented the owners of the property in the Matter of the Tax Assessment on the Equitable Building. I also represented the owners in the matter of the certiorari for review of taxes on the Macy Store, Broadway and 34th Street. On two occasions I have appraised all of the W. E. D. Stokes properties, including the Hotel Ansonia and some 40 or 50 houses in the streets between West 72nd and West 82nd Street. I represented the State Comptroller in the matter of determining a value for transfer tax purposes of the Pickney Estate, involving several blocks of property in Harlem and a number of scattered parcels in Manhattan. I also represented him in the matter of the Van Buren Estate, which comprised some 105 separate parcels on West 14th Street, Fifth Avenue, University Place, 13th and 15th Streets, and Union Square. I represented the property owners of I. T. Williams, Inc., whose land was taken for the improvement of the water front on Staten Island for the large public pier improvements there. I testified in certiorari proceedings representing the owners as to the value of the National Conduit & Cable Company

on the Hudson River, at Hastings. In the matter of acquiring the land for the government storehouses on New York Bay at First Avenue, 63rd and 64th Streets, in Brooklyn. In Brooklyn I testified as to the value of the property of the Brooklyn Rapid Transit Railway Company. I appraised property on the East River from 50 to 52nd Streets, East of Beekman Place.- In the matter of certiorari pro- [fol. 1049] ceedings for review of taxes. In the matter of certiorari proceedings for review of taxes I appraised and valued all of the land belonging to the Erie Railroad, the Pennsylvania Railroad, the Central Railroad of New Jersey, the Lehigh Valley Railroad, the West Shore Railroad, the Lackawanna Railroad, over on the west shore of the Hudson River, and running all the way from the Bergen County Line to Bayonne. I appraised property on Barren Island that the City was taking for the establishment of a ferry line across from what was proposed to be the foot of Flatbush Avenue to Rockaway. I represented the City in certiorari proceedings for the review of taxes on property known as the Century Building on Union Square and also three loft buildings on the southeast corner of Spring Street and Mercer Street and the Knickerbocker Hotel property at Broadway and 42nd Street, and on property at the corner of Madison Avenue and 61st Street on the American Thread Company's property on West Broadway and Beach Street. In 1909, in the matter of acquiring land for the widening of 161st Street and Third Avenue over to Park Avenue, I represented the City, and a great many other cases.

In Manhattan I have appraised the ferry property at the foot of Grand Street on the East River. Upland and Bulkhead at Tompkins and Mangin Street on East River. Upland and basin on East River between 9th and 10th Streets for Larocque estate. In 1917 upland and bulkhead on East River between 29th and 30th Sts. Sinclair property. [fol. 1050] In 1919 bulkhead land at foot of 32nd Street. Grain elevator. Land of New York Edison Company on the East River between 38th and 39th Streets. In 1913 Consolidated Gas Company property on East River between 42nd and 43rd Streets. Unimproved waterfront on East River between 50th and 52nd Streets. In 1916 American Malting Company property on East River between 63rd and 64th Streets. Waterfront on East River at 97th

Street, and on the East River between 98th and 99th Streets, and on the East River and 102nd Street. Harlem River between 122nd and 123rd Street- and between 125th and the Willis Avenue bridge and between 137th and 139th Street- and between 140th and 145th Streets and from 145th to 149th Streets and from 150th to 151st Street and at Shermans Creek at the foot of Dyckman Street at Harlem River from 218th Street to Broadway. In 1921 Harlem River from 205th to 206th Streets. In 1922 Harlem River between 209th and 210th Streets. In 1915, 42nd to 43rd Street, First Avenue and East River. Harlem River at foot of Dyckman Street. Hudson River between 41st and 42nd Streets and between 44th and 46th Street. Pier No. 32 North River. In the Bronx I have appraised on the East River from 136th to 137th Street. East River from 139th to 140th Street. In 1917 East River at foot of Cabot Street adjoining the N. Y., N. H. & H. R. R. yard. East River at Bryant Street. Bronx River at foot of Lafayette Street. Bronx River at the end of Classon's Point. Westchester Creek at Zerega Point. Westchester Creek at Ferris Land. Westchester Creek near Westchester Square. [fol. 1051] Eastchester Bay at Locust Point. In 1921 Eastchester Bay at foot of Town Dock Road. In 1919 Bronx Terminal. In Queens I have appraised on the East River at First Street at College Point. Property at Flushing Creek and Causeway near Flushing Bridge, Astoria Veneer property at Steinway Avenue and Bowery Bay, Astoria. East River at foot of Pierce Avenue, Long Island City, Newtown Creek at foot of Vernon Avenue, Newtown Creek at Greenpoint Avenue, East River between Broadway and Jamaica Avenue, Astoria, Dutch Kills and Borden Avenue, Long Island City, 300 acres of Rockaway Point, between Bay and Ocean Avenues, acquired by City for a park. Land at Rockaway Point comprising about 280 acres taken by the United States Government. In 1912 property known as Tent City at Sea Side, Rockaway Beach. In 1911 ocean frontage between Arvene and Edgemere known as the Norton property. In 1913 ocean front property at Edgemere north of Norton property. In Brooklyn I have appraised in 1919 property of the Industrial Alcohol Company at Newtown Creek and Commercial Street near the Vernon Avenue Bridge where Newtown Creek and the East River

join. In 1919 property of Rockland Rockport Lime Company on Newtown Creek and Kingsland Avenue near Greenpoint Avenue. In 1918 the Brice property on Newtown Creek at Maspeth Avenue, also a parcel at Maspeth and English Kills. The O'Leary Estate at the corner of Newtown Creek and Whale Creek, also about 5 blocks of property belonging to that estate on both sides of Whale Creek at Greenpoint Avenue. Parcel on Newtown Creek at Provost Street adjoining the O'Leary property. In 1917 East [fol. 1052] River at Dyckman, Walcott and Sullivan Streets. New York Ferry Companies property East River at the foot of Grand Street, Greenpoint. East River at the foot of South 6th Street, East River at the foot of South 8th Street, East River running through to River Street just north of South First Street. In 1917 Kent Avenue at Division Avenue and the East River. In 1913 Kent Avenue and Wallabout Canal at foot of Rodney Street. Sheer's property at Kent Avenue, West Street and East River, comprising about four blocks. In 1915 property at corner of Smith Street and Gowanus Canal. In 1918 E. W. Bliss property at 67th Street and New York Bay. Kings County Gas Company property at New York Bay and First Avenue at 54th Street. Property of Brooklyn Rapid Transit Company at New York Bay and 63rd Street and 64th Street. Ulmer Park on Gravesend Bay. In 1914 Dreamland Coney Island property taken for a park at Coney Island, between 5th and 10th Streets along the ocean front. In 1922 pier at foot of 33rd Street. In Staten Island I have appraised in 1920 the C. W. Hunt property on Richmond Terrace at West New Brighton, Staten Island. Property at foot of Broadway lying between Richmond Terrace and the pierhead line of West Brighton. In 1919 waterfront at Mariners Harbor lying between Richmond Terrace and Kill Von Kull near Van Pelt Avenue. In 1919 Downey Ship Yard at Arlington, Staten Island, corner of Bard and Richmond Terrace at Livingston, Stapleton, Staten Island. [fol. 1053] Property of the American Terra Cotta Company at Tottenville, Staten Island. In New Jersey I have appraised in 1922 Pennsylvania Railroad, New York Central Railroad, Lehigh Valley Railroad, Central Railroad of New Jersey. In 1920 property at Edgewater, New Jersey acquired by the Lord Construction Company for improvement

with docks. In 1918 Batterson property at Sunnyside, New Jersey, on the Hudson River about 3-7/10 acres. In 1909 property of the Edison Company at Shadyside on the Hudson River. In 1921 property of the General Chemical Company at Shadyside on the Hudson River. In 1920, 19 acres waterfront land on the Passaic River at Kearney, New Jersey. In 1921 La Tourette property at Bayonne, New Jersey, at Broadway and Second Street and Kill Von Kull. American Cotton Oil Company property at Bayonne, New Jersey, on the Kill Von Kull at Humphrey Avenue. In 1921 J. H. Le Dew property at Lincoln Highway and the Passaic River. In 1918 Ford Motor Company property at Lincoln Highway and the Passaic River in Newark Meadows. Drydock property at Perth Amboy on the Staten Island Sound at the foot of Washington Street. American Oil and Export Company property in the port Newark Terminal, Newark, N. J. Atlantic Terra Cotta property on Staten Island at Lehigh Street and Stamford Street, Perth Amboy. In 1910 property of the Roessler & Hasslacher Company between Fint and Broad Streets with fronts on the Staten Island Sound, Perth Amboy. Property of the American McKenna Process Company at Staten Island [fol. 1054] Sound and the Rahway River, Tremley. Property at Remley Point fronting on the Rahway River and the Staten Island Sound at Tremley, New Jersey, in 1921. In 1921 550 acres of land with 5,100 feet frontage on Hackensack at Secaucus.

I have personally sold a property known as the Lorrilard property at Westchester Creek and its junction with the Long Island Sound or East River and I also sold the Kerege Point property lying on the north side of Westchester Creek and practically surrounded by water. It is opposite the Fort Schuyler—the Havemeyer Estate, on Fort Schuyler Neck. I also sold a piece of property on Westchester Creek known as the Seamon property.

My office has made sales of waterfront property with which I have been familiar in the course of my duties with respect to the study of values. We sold to the Chevrolet Motor Company 19 acres at Hastings on the Hudson. That is the old place known as the Beckman Avenue plant. We also sold another parcel to the Chevrolet Motor Company of 16 acres, with buildings, known as the Kingsland Point

plant, and we also sold them 17 acres of land under water in between those two plants. We sold a tract of waterfront land in Brooklyn at Coffey, Dyckman and Walcott Streets, bulkhead and filled property with a basis, comprising about eight and three-quarter acres. We sold property on the Staten Island Sound to the New York Edison Company of about 37 acres. We sold 24 acres of land with a small building on the Hackensack River at Little [fol. 1055] Ferry. We sold the northwest corner of Kent Avenue and South Sixth Street, at Williamsburg, in Brooklyn. We sold the plot between Green Street and South First Street, along River Street to the American Sugar Company. I sold the Old American Malting Company's plant at 63rd Street and East River. We sold a tract of land on the Harlem River close to Broadway. We sold in New Jersey, at South River, five acres to the Herman Auken Company plant, five acres of land on the Raritan River, with buildings. We sold, at Edgewater, New Jersey, about 30 acres of land under water, with piers, to the Vacuum Company. We sold on staten Island two parcels of land which belonged to the Vacuum Oil Company. In the Newark Meadows, we have made something like 31 sales, comprising about 800 acres of land, some of them bulkheaded and some of it not, but all of it waterfront.

Referring to the land which is shown in blue tint on sheet No. 3 of what is known as Plaintiff's Exhibit No. 258 in this case, identified as Lot 30 in Block 982, Lot 1 of Block 988, Lot 1 of Block 991, and Lot 47 of Block 991, forming part of what has been called the 14th Street gas plant of the Consolidated Gas Company and referring also to sheet 7 of the same exhibit and the blue tinted portion thereof, the part identified as Lot 1 of Block 1089 and Lot 7 of Block 1107, Joseph P. Day, Inc. was employed by the New York Edison Company in October of 1923, to make an appraisal of the land as shown on those diagrams, but [fol. 1056] the work of making such an appraisal was performed by me in the first instance as head of the appraisal department.

I am familiar with the land which I have described as shown on these two sheets of Exhibit No. 258 and have been for many years. I visited and examined these properties away back in 1908, for the City of New York and am familiar with the values of real estate in that vicinity. I have kept

myself informed as to the sales, leases, mortgages and other transactions relating to the real estate in the parts of the Borough of Manhattan in which the land shown on the two sheets of this exhibit are located and I keep a card index of all transactions in which considerations are stated—information which I have gathered from the printed records and also from buyers and sellers and from other brokers, which I use continuously in my work.

I have appraised a great many properties in the neighborhood of 14th Street, Avenue B, C & D, among which are No. 131 Avenue B in 1924. No. 228-23- Avenue B in 1907, #228-230 Avenue B in 1918, the southwest corner Avenue B and 14th Street in 1911, #106-8 Avenue C in 1922, #121-124 Avenue C in 1920, #150 Avenue C in 1912, #215 Avenue C in 1912, the southwest corner of Avenue C and 7th Street in 1907, the southeast corner of 9th Street and Avenue C in 1904, #98-100 Avenue C in 1907, #7 Avenue D in 1923, #38 Avenue D in 1922, No. 80 Avenue D in 1915, #93-95 Avenue D in 1913, the block front on Avenue D between 13th and 14th Streets in 1919, on Avenue D, East [fol. 1057] River 13th to 14th Streets in 1923, on Avenue D 11th to 13th Streets in 1922, on Avenue D and East River 11th to 13th Streets in 1922, #33-35 Avenue D in 1911, and #81-89 Avenue D in 1922.

In the general neighborhood of 42nd Street, 10th, 11th and 12th Avenues, we appraised #557 west 42nd Street in 1919, #550 West 42nd Street in 1921, #135-139 East 42nd Street in 1917, on the north side of West 42nd Street east of First Avenue in 1911, a plot 50 × 50 north and south sides East 42nd Street, 247 feet east of First Avenue in 1913, on 42nd and 43rd Street First Avenue and East River in 1915, #519 Tenth Avenue in 1921, #452-56 Tenth Avenue in 1919, #521-529 Tenth Avenue in 1916, the southeast corner, Tenth Avenue and 40th Street in 1906, the northwest corner Eleventh Avenue and 37th Street in 1920. #440-442 Eleventh Avenue in 1921, #449-442 Eleventh Avenue in 1921, #440-442 Eleventh Avenue in 1905, #462 Eleventh Avenue in 1911, the southeast corner Eleventh Avenue and 38th Street in 1919, #370 Eleventh Avenue in 1921 and all of the Stevenson Brewing Company property on Tenth Avenue, 39th and 40th Streets in 1917.

At the request of the Consolidated Gas Company, I made

an appraisal of these lands which I have specified and described as shown on sheets 3 and 7 of Plaintiff's Exhibit No. 258, valuing such lands unimproved as of June 1, 1923, and formed an opinion as to what was the value on or about that date and since that time. In arriving at my opinion as to [fol. 1058] such value, I considered the following sales made in the neighborhood of 14th Street, Avenue A, B, C and D and the water front: In 1915 #222-8 Avenue C, in 1918 #734-6 East 14th Street, in 1918 #738-40 East 14th Street, in 1918 #199-207 Avenue D, in 1920 #643 East 13th Street, in 1920 #702 East 13th Street, 1920 #612 East 14th Street, 1920 #642 East 14th Street, 1920 #608-10 East 15th Street, 1920 #621 East 15th Street, 1920, #618 East 16th Street, 1920 #645 East 16th Street, 1920 #647 East 16th Street, 1920 #246 Avenue B, 1920 #279 Avenue B, 1920 #297 Avenue C, 1921,—#624 East 13th Street, #635 East 13th Street, #644 East 13th Street, #702 East Street, #606 East 14th Street, #607 East 14th Street, #609 East 14th Street, #640 East 14th Street, #619 East 16th Street, #640 East 16th Street, #196 Avenue B, #235 Avenue B, #237 Avenue B, #253 Avenue B, #279 Avenue B, #308-14 Avenue B: in 1922-#634 East 13th Street, #613 East 14th Street, #642 East 14th Street, #621 East 15th St., #623 East 15th Street, #625-7 East 15th Street #617 East 16th Street., #618 East 16th Street, #237 Avenue B, #256 Avenue B, #279 Avenue B, #287 Avenue C: in 1923 #540-2 East 13th Street, #609 East 13th Street, #630 East 13th Street, #637 East 13th Street, #641 East 13th Street, #646-8 East 13th Street, #702 East 13th Street, #706 East 13th Street, #607 East 14th Street, #608 East 14th Street, #612 East 14th Street, #615 East 14th Street, #607 East 15th Street, #619 East 15th Street, #621 East 15 Street [fol. 1059] #615 East 16th Street, #616 East 16th Street, #230-2 Avenue B, #237 Avenue B, #239-45 Avenue B, #285 Avenue B.

In making my valuation of the portion of the bluetinted part on Sheet No. 7, I considered the following sales in the neighborhood of 42nd Street, 11th and 12th Avenues: in 1911 #649-51 West 42nd Street, in 1913 #635 West 42nd Street, 1916 #636-B West 39th Street, 1922 the southwest corner of 45th Street and 12th Avenue, 1920 #428 Eleventh Avenue, 1920 #432 Eleventh Avenue, 1920 #436 Eleventh

Avenue, 1920 #540 Eleventh Avenue, 1920 #556 Eleventh Avenue, 1920 #608 Eleventh Avenue, 1921 #527 West 43 Street, 1921 #552 West 43rd Street, 1921 #551 West 44th Street, 1922 #555 Eleventh Avenue, 1922 #557 Eleventh Avenue, 1922 #592 Eleventh Avenue, 1922 594 Eleventh Avenue, 1922 #596 Eleventh Avenue, 1922 #596 Eleventh Avenue, 1922 #602-4-6-8 Eleventh Avenue, 1922 #561 West 42nd Street, 1922 #553 West 44th Street Street, 1922 #555 West 44th Street, 1922 #557 West 44th Street, 1923 #571 Eleventh Avenue, 1923 #582 Eleventh Avenue, 1923 #526 West 40th Street, 1923 #550 West 41st Street, 1923 #527 West 43rd Street.

In arriving at my opinion of the value of the different parcels of land shown on Sheets 3 and 7 of Plaintiff's Exhibit No. 258, I adopted the areas as shown on these sheets. I understand the land- shown on these two sheets were purchased in the fall of 1923 by the New York Edison Company, at the price at which I appraised them. In my opinion, the value of the parcel of land unimproved, identi- [fol. 4060] fied as Lot 13, Block 982 on the west side of Avenue C between East 14th and East 15th Street, as shown on Sheet 3 of Plaintiff's Exhibit No. 258 was $437,500, on or about June 1, 1923. The value of the parcel of land unimproved identified as Plot 1, Block 988, between Avenue C and D and East 14th Street and East 15th Street as described on Sheet 3 of Plaintiff's Exhibit No. 258 was $680,000 on or about June 1, 1923, and of the parcel of land unimproved identified as Lot 1, Block 991, between Avenue D and Marginal Street and between East 14th Street and East 15th Street, as described on Sheet 3 of Plaintiff's Exhibit No. 258 was $361,755 on that date. The value on or about June 1, 1923, of the parcel of land unimproved identified as Lot 47, Block 991, which is denoted as the bulkhead along Marginal Street, as described on Sheet 3 of Plaintiff's Exhibit No. 258 was $67,800. The value of the parcels of land unimproved, identified as Lot 1 of Block 1089 and Lot 7 of Block 1107, between 11th Avenue and the North River and West 41st Street and West 42nd Street as described on Sheet 7 of Plaintiff's Exhibit No 258 was $2,000,000 as of June 1, 1923.

With respect to the parcels of property located in contiguous blocks, in my judgment there would be an added

advantage to a concern such as a gas company having a neeeessity for land in contiguous block in order to conduct the operation of a plant with greater economy than it could if the operation was to take place with portions located [fol. 1061] within different blocks separated from each other.

Cross-examination by Mr. Donnelly:

I had no conference or consulation with Mr. Day as to the figures that I submitted except one of these appraisals, which I sent downstairs for his signature. I think that is the parcel on Eleventh Avenue, 41st and 42nd Street. I have a recollection that he asked to see that appraisal before it went out. He said that there was something in there that I had included as a pier and that a pier was not included, and so I eliminated from my appraisal figure what I had allowed for the pier. That is on Sheet No. 7, Block 1089, Lot 1, and Block 1107, Lot 7. I treated them as one parcel, and there was an old pier out in there, and I included that in my first appraisal and sent it down to let Mr. Day see it. He said that I was to appraise land only and have nothing to do with any structure or pier, so I took that off and made my appraisal according to those instructions, which include merely the land, the bulkhead and whatever water rights there were.

I have made appraisals for various individual corpora- [fol. 1062] tions for all purposes and many times I did not know the purpose for which the appraisal of the property was being made. In 1922 and 1923, I conducted personally the sales on properties on Westchester Creek for E. L. Sawyer, Inc., Speculator in Real Estate. After the sale Mr. Sawyer resold to the House of Good Shepherd and another piece was sold at auction in lots.

Personally, I have not made a sale of water front anywhere in New York, on New York Harbor, outside of these properties that I have mentioned, in ten years.

I have appraised the following water front properties upon the East River; 14th Street, 13th Street, Avenue D and property belonging to the Mastick Dock Company, for sale; the property of the Gas Company between 11th and 13th Streets, Avenue D, for the purpose of sale; for our office the property of the American Malting Company at the

foot of 63rd Street. I appraised for our office the property [fol. 1063] on the Harlem River, about 150 feet east of Broadway, for sale, and the property of the Vacuum Oil Company or a branch of the Vacuum Oil Company, on the Hudson River at Inwood, for sale, also the property of the Vacuum Oil Company on Staten Island near Arlington for sale, and showed our salesmen how to split it up and the prices they ought to ask for the divisions of a large tract. I appraised property in Newark Meadow, on the Passaic River, for the American Splint Company, in order that they might determine a price at which to sell the property, and it was sold at that price. I appraised the property for the Trexler Lumber Company on the Passaic River adjoining the Pennsylvania Railroad tracks, and it was sold at practically the price I placed upon it, to the Pennsylvania Railroad. I appraised all of the property, which was bought by the Western Electric Company on the Passaic River, at the crossing of the Central Railroad of New Jersey, Newark Branch, and they bought that at the price that I placed on it.

I certainly consider everything along the water front in New York Harbor, including sales of water front property on the Passaic River or in the Newark Meadows, in determining the values of water front property. I profess to be familiar with the advantages and the disadvantages of the water front property and I consider them in making com- [fol. 1064] parisons. I do not say that water front property as far away as the Passaic River has any bearing upon the water front here, but they all go to make up my experience on water front properties, and my experience of the advantages and disadvantages of the various locations.

Information as to the details of the transactions and the prices at which the properties were purchased, etc., in respect to the sales I mentioned, was derived by a reference to [fol. 1065] the Real Estate Record and Guide, information given me by some broker and the record in the Register's office. The revenue stamps on some of the deeds covering those transactions served as a guide.

These sales included property at public auction, but were partition sales or voluntary sales. Those I consider a safe guide. Foreclosure sales would not be a safe guide, I do not consider foreclosure sales are conclusive on value, and they

generally result in prices lower than what would be termed fair market values.

With reference to Sheet 3, most of the sales were of small parcels, the large sales were those made to the Eagle Pencil Company; most of the other sales were small sales of individual houses, 25 by 100, 16 feet 8 by 100, 20 feet 8 by 100. Nearly all those small parcels had tenements.

As to the general character of the neighborhood of 14th Street, on the south side you have from the East River to Avenue D a collection of—a lumber yard, brick yard and coal yard, then you have the Eagle Pencil Company's property; then you begin to have tenements and stores along on the south side of the street. On the north side of the street you have this property of the gas company and at Avenue B you have the old car barn; along Avenue C you have some tenements; 15th Street and 16th Street west of Avenue B you have tenements, and some more of the gas company's property north of 15th Street, you have the Willard Parker Hospital for contagious diseases occupying the land along Marginal Street from 15th to 17th Streets.

In making up my valuation of $437,500, for Block 892, Lot 13, I adopted the following method: I considered a lot on 14th Street $12,500 and a lot on 15th Street $9,000, and a lot on Avenue C $10,500. The calculation would be as follows: 15.4 lots on 14th Street at $12,500; $192,500; a key [fol. 1066] lot, which is the lot next to the corner, 20 per cent extra, $15,000; a corner lot, 50 per cent extra, $18,750; 2 lots on Avenue C, at $10,500, $21,000; one key lot, 20 per cent extra, $12,600; one corner lot, 50 per cent extra, $15,750; and 13.36 lots on 15th Street at $9,000, $120,240, making a total of $395,8[illegible] I gave 10 per cent plottage as additional value, $39,584, making a total of $435,424, and I said in round figures $437,500. There is a difference in the units upon 14th Street as compared with 15th Street because 14th Street is a more important street, a wider street and a traveled street and also there are car lines on 14th Street.

In valuing Lot 1 of Block 988, I considered that in that block a lot on 14th Street was worth $12,000, a lot on Avenue C $10,000, a lot on Avenue D $10,000, and a lot on 15th Street $9,000. The calculation would be 23 lots on 14th Street at $12,000, $276,000; two key lots, 20 per cent extra,

$14,400, making $28,800; two corner lots, 50 per cent additional, $18,000; $36,000; two lots on Avenue C at $10,000, $20,000; one key lot $12,000 and one corner $15,000, 19 lots on 15th Street at $9,000, $171,000. Total $605,800. Because this took in the entire block, I added plottage, 12½ per cent, $75,625, making the exact calculation $681,425 and I called it in round figures $680,000.

A key lot is the lot that I believe is taken in connection with corner lots. For the purpose of making any important improvements you have to have more than one lot. You [fol. 1067] can make an important improvement on a corner 50 by 100. The addition of the lot next to the corner *to the corner* results in a considerable saving in the operation of a building and you can also cover a larger proportion of the two lots with a building than you could cover with two separate buildings, so that you get additional rentable area and you get lessened operating costs and therefore that key lot is particularly desirable for improvement in connection with the corner, and we call it a key lot and give it additional value. I have made calculations at different times on buildings separately, that is, the improvement of the corner lot and the next lot with separate buildings, and afterwards calculated an improvement covering both lots and operated as one unit and arrived at the conclusion that generally it is worth at least 20 per cent more than the third lot away or the fifth lot away from the corner.

In reaching my valuation of $361,755 on Block 991, Lot 1, I used a unit of $12,000 for 14th Street lots, a unit of $12,000 for Avenue D lots, $9,000 for 15th Street lots, and $15,000 for the lots fronting on Marginal Street. The calculation was: Four lots on Avenue D, $10,000, $40,000; two key lots at $12,000, $24,000; one corner of 14th Street, 75 per cent additional, $17,500; one corner of 15th Street, 50 per cent extra, $15,000; 6.4 lots on 14th Street at $12,000, $76,800; 3.14 lots on 15th Street, at $9,000, $28,260; eight [fol. 1068] lots fronting on Marginal Street at $15,000, $120,000. Total $321,560, to which I added plottage 12½ per cent, amounting to $40,195, making a total calculation of $361,755.

Where I find in the City of New York, Borough of Manhattan, two lots adjoining and in one ownership, I always give 10 per cent plottage.

[fol. 1069] April 14, 1924.

Met pursuant to adjournment.

HENRY M. BRUNDAGE, called as a witness on behalf of the plaintiff, being duly sworn, testified as follows:

Direct examination by Mr. Ransom:

I reside in Portchester, New York, and have been the Secretary of the Consolidated Gas Company since the spring of 1920. Mr. Robert A. Carter was secretary before me. Before I was elected secretary to succeed Mr. Carter, I was the Assistant Secretary from the fall of 1910. I have had charge of the accounting department and its entire operations since the spring of 1903. I began with the gas business in 1894. I have served thirty years. My first connection was with the Standard Gas Light Company, now one of the subsidiaries of the Consolidated. When I began, it was a junior clerk in their general office. I remained with them about seven years and in that time I had become chief clerk of their accounting staff. Then I I went from them to the United Electric Light & Power Company, both the Standard and the United Company having meanwhile become affiliated with the Consolidated, and I went with the United Company in the fall of 1901, and remained about a year and a half as head of their accounting staff. Then in the spring of 1903 I was brought to the general office of the parent, where I have since remained. About 1908 I was made Controller of the Company and then about 1910, I was made Assistant Secretary and in 1920 Secretary. As head of the accounting department I took charge personally when I first went to the [fol. 1070] general office and kept practically every record that the department maintains. Of course, as the business expanded and additional men were added to our force, much of the detail work was delegated to subordinates. I designed a great number of the forms that have been used. My relation to the Uniform System of Accounts that was issued as of December 31, 1908 was as follows: Prior to that time the accounting representatives of both commissions, there being then two commissions in New York State, came to New York, and we had numerous conferences. I

attended practically all of them and assisted the Commissions' representatives; gave them the benefit of our experience; helped them in drafting proper texts for accounts to be maintained by gas companies; give them suggestions as to forms of report; and was with them through all these many months while they were getting up the uniform classification of accounts. I saw to it personally that this whole system as laid out by the Commission was actually adopted by the Consolidated Gas Co. Each of the gas companies affiliated with the Consolidated Company has its own independent accounting staff and their own separate accounts and records. Their accounting officers confer with me as to the method to be employed by them in recording transactions in their books, more particularly about the preparation of data for the P. S. C. annual report. My relation to the formulation of the present Uniform System of Accounts as it is in force in this State was as follows: [fol. 1071] In the spring of 1920 the National Association of Railway and Utility Commissioners appointed a committee with authority to invite representatives of the American Gas Association and the National Electric Light Association to confer with them in an effort to establish a uniformity of accounting systems for gas and electric companies throughout the United States, and they called a conference in the City of Chicago in the spring of 1920. Both of the National Associations appointed committees to confer with this Commissioners' Committee and the American Gas Association appointed me as one of their representatives, and I went to Chicago and we sat in conference for many weeks. Then, as the result of those conferences, the Commissioners' Committee appointed a subcommittee of their own people. There were three, as I recall it, on that committee, and they worked all summer carrying out into actual working forms the many things that had been discussed at these long conferences. Then in the fall of 1920 we were again called in joint conference and the work of this sub-committee was submitted to us and we had a conference for about a week or ten days, and the Commissioners' people prepared a report which they submitted at the annual convention of the Commissioners' Association held in Washington,

and the report was received and adopted and recommended for adoption by the State Public Utility Commissioners of all the States in the Union. This National classification was adopted in New York State on December 19, 1923. [fol. 1072] The order of the Commission made the adoption of the classification optional as of January 1, 1924, and gave all the companies of New York State until July 1st to adopt the order, with the privilege that they might adopt it on the 1st day of any month from January 1, 1924, to July 1, 1924. In the case of our own company, as soon as this order came out we started at once preparing for the adoption of the new classification, which we did make effective on January 1, 1924, so that our 1924 accounts have been kept under the system prescribed by the Commission by order of December 19, 1923. I am the secretary of the Astoria Light, Heat and Power Company and have been identified with that company since March, 1903. When I went to the general office in March of 1903 the Astoria Company was just ready to start its construction. Up to that time they had been organizing the company and acquiring the land, and when I came there this construction work was just about ready to start, and I was at once placed in charge of the accounting features of that work, laid out their whole accounting structure, designed their books and forms and records and data and routine of everything that would be required to record the construction of the company's plant, and later on to take care of its operations after the construction work was finished. The system that I then laid out operated until December 31, 1908, when the first P. S. C. system came out. It was superseded and modified to some extent by the system prescribed by the commission. The system [fol. 1073] prescribed by the Commission as the original Uniform System of Accounts continued in use from December 31, 1908 to December 31, 1923, when it was superseded by the present national classification. I became secretary of the Astoria Company about four years ago. Before I was secretary I was the assistant controller of that company for a great many years—some ten or twelve years.

I am a member and director of the Empire State Gas and Electric Association, and a member of its Accounting

Committee. I am a member and a director and the treasurer of the American Gas Association. I am a member of the Illuminating Engineering Society. I was the father and the first president of the Society of Gas and Electric Accountants and am still a member. I am also a member of the Accounting Committee of the American Gas Association. I am also a member of the National Electric Light Association and a member of its accounting committee.

The scope of my duties as secretary has been to supervise every feature of the records of the company from its inception to the final balance sheet. That all comes within the Secretary's jurisdiction. That includes the recording, so far as the books of account are concerned, of all phases of its transactions and activities, and the keeping of the minutes of the Board of Trustees and keeping the minutes of the Finance Committee; attending the meetings of the Board's Committee of Accounts; attending to all the secretarial work and corporate work of the company, and [fol. 1074] being responsible for its records and its contracts. During the time that I was Assistant Secretary and Mr. Carter Secretary, the scope of my duties with respect to the matters which might ordinarily be regarded as within the Secretary's function during that period of ten years from 1910 to 1920 were practically the same as they are now. While Mr. Carter was the secretary of the company, his time was so necessarily devoted to questions of financing and management of the company, he holding the position of vice-president and secretary, that the secretarial work of the company was in my hands practically since 1910.

As assistant secretary and secretary I have had complete charge and jurisdiction over the keeping of all the books of account and the subsidiary books and records of the Consolidated, and custody of all contracts and agreements, and I indicate the general course of the accounting work of the company and am responsible for its execution by the staff of employees of the company. They report to me. I am responsible for the carrying out of the accounting system and the uniform system of accounts prescribed by the commission. I am continuously and personally in contact with this work of the accounting department. We have twenty odd men under my jurisdic-

tion in the accounting department of the Consolidated there continuously, and nine in the Astoria Company's accounting department. Those figures eliminate the chief clerks of the department and the assistant secretaries. These are really the clerical employees of the Accounting Department.

[fol. 1075] Before January 1, 1909, we devised our own system of accounts according to the accounting practices of the time. There was no system prescribed by a public authority.

Prior to January 1, 1924, we employed substantially the same titles as set forth in the Uniform System of Accounts for Gas Corporations, with a few variations. We did not carry the accounts, "General Amortization," and "Accrued Amortization" included in the Commission's system, as we do not wish to amortize our property, and had no such transactions as those accounts of the Commission indicated. We did carry an operating account "Renewals & Replacements" and an account under the title of "Renewals & Replacements Reserve" to which was credited amounts charged to operating expenses. We set up the account "Automobile Expense" and an account for profit and loss, for which the Uniform System of Accounts made no provision, and we set up many subdivisions of prescribed accounts. These variations were embodied in the new and present Commission's classification.

[fol. 1076] I am familiar with the general books of account which have been and are kept by the Consolidated Gas Company. The general books of account which are kept by the Consolidated Gas Company under my supervision and direction during the years 1922 and 1923 were as follows: A general ledger, a general ledger balance book, a general ledger journal, operating ledgers, operating journal, sundry debtors' ledger, sundry debtors' blotters, sundry debtors' balance book, sundry creditors' ledger, sundry cerditors' balance book, audit sheets, payroll summaries and cash book.

There is also the operating ledger balance book. We also keep a statistical record of the operations of the company. That is a monthly report which is prepared for the guidance and information of our officers.

(The witness then described the various books of account which were marked for identification as Exhibits 689 to 724 inclusive, for identification.)

[fol. 1077] During 1922 and 1923, the number of our employees varied somewhat, depending upon the time of the year. In an approximate way, we had about 3,200 employees, I would say the average. Our company divides itself logically into, I should say, five divisions. There is a General Office, and the manufacturing stations, including the holder stations, and the Street Departments, and the shops, and the commercial offices. The General Office would consist, first, of the officers of the company and their staff, and what we call the general office departments, such as the Purchasing Department, Stock Transfer Department, Cashier's Department, Statistical Department and Payroll Department. And then there is a Paymaster's Department. Those departments to which I have just referred are departments organized under the general authority of the general office. The Engineering Department consists of the manufacturing section, and then the construction force, and the Drafting Department, and the [fol. 1078] Chemical Department. As to the Manufacturing Department, the holder stations are included with the manufacturing plant as a subdivision of the Engineering Department. They all operate under the direction of the chief engineer.

The different locations which are subdivisions of the Manufacturing and Holder Station Departments, consist of the East 11th Street Manufacturing Station; East 14th Street, which was a manufacturing station at the end of 1923 and has since been sold, of which a holder station is still retained on the north side of East 15th Street; East 21st St. a manufacturing station; West 42nd Street, which was a manufacturing station until the property was sold: West 44th Street, formerly a manufacturing station until the City condemned the property and now a holder station: East 63rd St. Holder Station; West 65th Street Holder Station; East 99th Street Manufacturing Station; East 111th Street Holder Station; West 132nd Street Holder Station, and Kingsbridge Holder Station.

The head of each department or sub-division of department makes monthly reports which go to the Accounting

Department. There are also other reports in addition to these monthly reports made at other intervals of time. For example, the receipt of material is a daily routine. There [fol. 1079] are other reports made monthly or semi-monthly or weekly, according to the needs in the course of business. And that has been our practice for thirty years that I know of. These monthly and other periodical reports come to me as head of the Accounting Department. Such of these reports as are the basis of entries in the books and accounts of the company are forwarded to the Accounting Department at once.

(The witness then stated the various reports received by the Accounting Department monthly.)

In addition to this list of reports which are made the basis of entries in the regular course of business in the accounts of the company, there are various departmental records subsidiary to this list, which are not sent to the Accounting Department.

I have a force of employees, accountants, bookkeepers or [fol. 1080] clerks who make the entries in the books of account kept by the Accounting Department under my direction. I personally direct and supervise their work, and from time to time indicate where entries should be made by the various employees of the Accounting Department, how they should be made and what entries should be made. I have from time to time in the regular course of my duties checked entries made from reports of the sort that I have just listed in the books of account which I have described, such entries as were made by the employees of the Accounting Department under my direction.

There is a standing committee of the Board of Trustees of the company which makes periodic examinations of our accounts. That is the committee to which reference was made this morning in connection with the General Ledger. It is a committee appointed by the Board of Trustees, consisting of members of the Board of Trustees, known as the Committee of Accounts. I am familiar with [fol. 1081] the work of the committee, and I serve as the secretary. This Committee verifies each month the cash receipts and disbursements, checking the original vouchers against the cash book and verifying that all vouchers bear the approval of the properly authorized officers of the com-

pany. They check the outstanding balances at the end of the month in the General Ledger and in the Sundry Creditors Ledger, and sign the respective balance books, and also submit certificate of their findings to the Board of Trustees of the company at its monthly meetings

It has been the practice of the Consolidated Gas Company to have its accounts audited annually by what we call outside or independent auditors or accountants. There was such an audit made for 1922, by Patterson, Teele & Dennis, a firm of public accountants in this city. Such an audit has not so far been made of the company's accounts for the year 1923, owing to the demand for our books by the exigencies of the rate case.

The plaintiff company makes annual reports to the Public Service Commission. The detailed form of such annual reports is prepared and furnished by the Commission, and we comply with the form which they furnish. I supervise the preparation of the reports to the Commission.

In pursuance of the order made by Judge Winslow in this case with regard to the inspection of our property and the production of our books and records, representatives of the defendants have been at the offices of the company for the purpose of examining the books and records. Representa-
[fol. 1082] tives of the Attorney General's office have been with us practically continuously since September 1, 1923. In respose to requests submitted by them from time to time, all of the books and records requested coming within the purview of the order of the Court, have been produced.

Examiners from the Commission are with us more or less all of the time, both for examination of accounts and underlying records, when there is rate litigation in progress and when there is not. I do not know at what time the representatives of the Commission began examination with respect to this case, as distingished from general regulatory work.

The books of the Astoria Company have been submitted to the examiners of the Attorney General and are periodically inspected by the representatives of the Commission in the same manner as our own books.

[fol. 1083] During 1922 and before those years, and since that time, I have filed with the Public Service Commission periodical statements of capital expenditure for both the

Consolidated Gas Company and the Astoria Company monthly for some four or five years.

During the years 1921 and 1922, there were various data with respect to the coal and oil contracts and results of manufacturing operations filed with the Commission. Coal is, and has for many years been, bought under contract. It is delivered to the station to which the engineering department have directed its delivery, and, as it goes into the station, a record is taken from the bill of lading, our coal being bought at bill of lading weights.

Upon delivery, record is made by the yard foreman to the station office of the tonnage received and other details of the shipment. The station office issues receipt vouchers, signed by the Superintendent of the station, setting forth this information, the original of which is sent to the Accounting Department and is matched with and attached permanently to the shipper's bill as a matter of record. The bill is verified as to its mathematical accuracy, is recorded in the contract record, checked against the contract as to terms and prices, entered on the audit sheet and forwarded to the Treasurer's Office for payment at the time as indicated in the contract.

The contract record is a secretarial record, not a part of the books of account, in which is kept a cumulative statement showing the balance of undelivered coal.

[fol. 1084] Upon the purchase of supplies not covered by an advance contract, the departmental superintendent prepares, and signs a requisition indicating his requirements, and forwards it to the head of the department. If the material needed cannot be supplied from some other shop by transfer, the requisition upon approval is passed on to the Purchasing Agent, who proceeds to get competitive quotations for the material. An order is issued to the successful bidder, a copy of which is sent to the department issuing the requisition, and a copy to the Accounting Department. Upon receipt of the goods by the department, a receipt voucher for the material is prepared and checked, and is submitted for approval of the Superintendent, and is then forwarded to the Accounting Department. The Accounting Department matches the receipt voucher with the creditor's bill, checks every computation, and assigns the

proper accounting classification. The Purchasing Department verifies the prices, and the bill is submitted for the approval of the Auditor, being listed upon the audit sheets, Exhibits Nos. 723 and 724 for identification.

As to material charged to Material and Supplies when purchased, report, signed by the Superintendent, is received from each of the various departments monthly, of the withdrawal of such material, accounting for the quantity withdrawn and the use to which it should be charged, which results in monthly entries crediting the stock accounts and charging the operating or construction accounts.

[fol. 1085] Oil is purchased under contract. Instructions are sent to the oil companies as to the stations to which oil is to be delivered. Under the contract, Produce Exchange measurements govern the delivery. We are obligated to pay whatever the Produce Exchange figures indicate. The receiving station gets the oil by tank boats. At [fol. 1086] all of the stations actual measurements of deliveries are taken by means of gauges on the tanks. Those actual measurements by gauges, at the time from the delivery from the barge into the tank, are used as a verification of the accounting entries, and the payment is made on the basis of the Produce Exchange certificates. So far as the accounting department records of quantities of oil for which we pay are concerned, the quantities are certified to by the Produce Exchange. In the course of business, a voucher or record comes to me from the manufacturing department, showing on the receipt voucher the amount of gallonage as reported by the Produce Exchange, together with the gallonage as reported by their tank measurements. The certificate comes to me from the Produce Exchange with the bill. I get from the manufacturing department with respect to the receipt of oil, a certificate over the signature of the superintendent of the station, who indicates his tank measurements as well as the Produce Exchange measurements. The sundry creditors bill for oil is passed through our regular routine and is charged to the oil stock account, and the routine with respect to oil used is the same as for coal, in the form of a monthly report of the quantity used, from which an entry is made crediting oil stock and charging gas manufacture.

[fol. 1087] The accounting department determines the classification of accounts to which a charge is to be made on any material purchase, and in the case of the use of material and the classification of accounts with respect to charges for such use, the classification is made by the accounting department, upon the basis indicated by the receipt voucher from the receiving station as to the use to which the material was to be put.

Pipe and specials are handled in the general way in which I have described with respect to major materials bought. The same routine is observed. Pipe and specials are bought under contract.

(The witness then described in detail the course of business in connection with the purchase of pipe.)

[fol. 1088] As to labor, let me take the stations and shops and the street departments all in a group, because they are all handled exactly alike. In each of these cases a record is maintained of the hours of labor performed by each employee and the classification to which that labor should be charged. The initial record in the station is kept by a timekeeper; in the shops it is kept by the shop clerk; in the street department it is kept by the district foreman. In all of these three departments, stations, shops and street departments, there is a system provided under which at the end of each week a separate weekly time card is made for each employee, with the days of the week across the top of the page, and places for the number of hours, and the classification to which that number of hours work is to be charged. When those cards are made up at the end of each week they are submitted to and approved by the superintendent of each district and upon his approval they [fol. 1089] are then sent to the payroll department at the general office and form the basis for the payroll. The payroll, which is made by the payroll department, lists the man's name, the rate and the amount of money to be paid him, and concurrently those cards are put through the payroll department for the purpose of determining the aggregate classification. The individual cards signed by the superintendent are submitted to the auditor with the payroll and he verifies that the payroll is in exact accordance

with those original signed tickets. Then the payrolls go to the treasurer and they are paid then through the medium of the paymaster's department. The treasurer draws a check to the order of the paymaster, for the aggregate [fol. 1690] amount of the payroll and the paymaster takes that check together with a list of the denominations in which he wants the money, to the bank, draws the money, puts it up in envelopes and takes it out accompanied by proper guards to each department of the company and pays the men off.

The payroll department makes up the payroll summaries which I referred to this morning. These summaries are made up from the cards as they are received in the payroll department. It is the payroll summaries that form the basis for the charge by the accounting department, and from those summaries are shown the amount of labor and the appropriate accounts. The course with respect to the labor in the street department that is substantially the same as in the manufacturing department, except that the time is kept by a district foreman rather than by a time-keeper. In the motor department shops this course of business is practically the same as in the manufacturing and holder stations.

About the labor in the commercial department, the course of business there is on a little different basis. Those men are all paid on a weekly basis. By the commercial office we mean the five branch offices scattered throughout the city. Those men are all on a weekly basis and their time is not [fol. 1691] put through our general payroll department. Their being on a weekly basis, the roll is made up by the chief clerk of each of these offices, checked by the cashier, approved by the superintendent of each branch office, and upon the completion of the payroll and all these approvals, they are then transmitted to the treasurer, of course going meanwhile through the auditor's office the same as the hourly men are. So that, in the branch office we have the certification of the branch office cashier, the chief clerk and the superintendent.

The Treasurer maintains in his office a roster of the employees on the General Office Weekly and General Office Monthly payrolls. These payrolls are made up and verified by the General Office Cashier, approved by the Treasurer,

the weekly payroll being paid through the Paymaster's Department, and the Monthly payroll, consisting of the officers and superintendents of the various departments, being paid by check on the 15th of each month.

[fol. 1092] As to accounting for the quantity of gas that is made and sold, including the revenues from the sale of gas—the original record, of course, of that transaction is all handled through the commercial departments. All five district offices operate under the same general method. The gas make is a matter of hourly record through the station meters of each station and that is kept by the station people and transmitted to the accounting department at the end of each month. The record of the gas sold comes to us through the commercial department—that is gas metered on the premises of all the consumers. The report to the accounting department is a summarized record from each commercial office, certified by the head, showing the balance outstanding on the consumers' ledger at the beginning of the month plus the amount of sales during the month based on actual index quantities, less cash paid, less any credits for deposits and interest to reduce consumers' accounts, uncollectible bills written off applied and brought down to a balance at the end of the month, and from that record the accounting department makes a charge on the general books charging sundry consumers and crediting gas sales the amount of the gas sales, and contra. The amount of gas made and sent out at each of the various manufacturing stations is certified to me over the signature of the superintendent of the station, and the amount of gas sold, the revenues therefrom and the charges made against the various consumers in the consumers' ledger is certified to by the superintendent of each one of the five branch offices.

The witness then described in detail the routine of the system in determining and accounting for the amount of gas sales to each consumer in the branch offices.

[fol. 1093] There are other revenues earned and received by our company in connection with our gas business. We have a substantial gas merchandise revenue account and we have a substantial rental revenue. We sell some appliances, and we rent a substantial number of appliances.

That is done through our commercial department. This sale of appliances is conducted and handled by the five commercial offices. We have men in the different branch offices selling appliances to our consumers. In those different branch offices there are on the sales floor samples of the appliances which are recommended by our company for the advantageous use of gas. We keep our commercial offices well supplied with the very last word in gas burning devices,—such appliances as we think would best serve our consumers, and which would extend the use of gas into new fields. The same thing is true with respect to the renting of what we regard as safe and suitable and economical appliances. Many consumers prefer to enter into a rental agreement, and under the agreements that we have with our consumers we undertake to give him service in its broadest terms. We repair and maintain and equip his appliances with new burners if they are worn out, and if necessary, replace the appliance. We regard that as advantageous for the carrying on of our gas business to have that relationship to the appliances in which gas is consumed. We think it is fundamental to keep appliances in the district rendering satisfactory service to the consumer.

[fol. 1094] April 14, 1924.

Met pursuant to adjournment.

ROBERT HUNTLEY, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination (continued) by Mr. Donnelly:

Referring to Lot 47 of Block 991, that was the bulkhead, 226 feet long, and together with whatever water rights they had, valued at the rate of $300 per lineal foot per running foot, 226 feet at $300 per lineal foot $67,800. I did not find what the assessed valuation was for 1923. In making my valuation I assumed that the bulkhead was owned by the Gas Company. I did not give any added value to the bulkhead by reason of the fact that the ownership of the bulkhead is in the same party as the ownership of Lot 1, Block 991. I appraised these properties shown on sheet 1 for the sale to the Edison people and that includes the bulk-

head and the parcels on sheet 3 as to which I gave
valuations. I appraised just the land. I made no
praisal of the buildings.

I considered the land as being vacant land without any
provement in the shape of buildings. I gave no consid
tion to the fact that the land was occupied by building
improvements. I have appraised a great many proper
in that neighborhood, and it is quite possible that som
the sales that I looked at I may have appraised at s
time. I did not check those up in that way. I arrive
my land valuations there where the properties were
proved by deducting the value of the buildings I got at
value of the buildings by taking the tax assessed valu
those cases. It is printed with the records, so I acce
that in some measure as the value of the buildings.
[fol. 1095] prices at which I appraised these parcels
for the sale to the Edison people were the prices at w
the Edison people bought. The information that I had
that in making the purchase Edison people agreed that
value that I placed upon the land was to be the valu
lotted to the land. I received that information from
Brundage of the Consolidated Gas. They paid on
parcel the price which I have placed on this—let us take
bulkhead first. They paid $67,800 for the bulkhead.
Block 991, Lot 1, they paid $361,755,—the total valuat
They paid this just for the land. I do not know how m
they did pay for the land and improvements.

My appraisal for the Edison people was made in Nov
ber, 1923. I talked with Mr. Murray, he is an officer of
Edison Company. I do not remember just what his
is. Mr. Day asked me to make the appraisals. A
wards I talked with Mr. Murray. When I first met
Murray, I think his title was general manager, someth
of that sort, and that is a good many years ago. But
valuations I have given these parcels are as of June 1, 1
There has been no change in the valuations between J
1, 1923, and November, 1923.

I have been acquainted with Mr. Stevens a good m
years. I did not talk with him about my valuations or
valuations of any of the parcels shown on sheet 3 befo
testified. I did not discuss my figures with him at all
did he discuss his figures with me. Mr. Stevens did not

me that he had made valuations of these parcels shown on sheet 3 in an affidavit for the plaintiff. I was not ac-
[fol. 1096] quainted with the valuations that he gave as contained in that affidavit.

Sheet 7 of Plaintiff's Exhibit 258, there I valued Block 1107, Lot 7, and Block 1089, Lot 1, and not Lot 23 of Block 1090. I was not requested at that time to appraise that. In arriving at my valuations of the two parcels shown on that sheet I considered it all as being one parcel. I considered that a lot on Eleventh Avenue was worth $20,000; a lot on 42nd Street worth $20,000; a lot on 41st Street worth $15,000. There were four lots on Eleventh Avenue at $20,000, $80,000. Two lots, which would be key lots, 20 per cent extra, $24,000; total $48,000. A corner of 41st Street, worth 50 per cent over the unit, would make that lot worth $30,000. A corner, 42nd Street, worth 75 per cent more than the unit, would make that lot $35,000. There were twenty-eight lots on 42nd Street at $20,000, $560,000. Twenty-eight lots on 41st Street at $15,000, $420,000.

In the bed of Twelfth Avenue, if it had been opened in what might be termed the bed of Twelfth Avenue; it was once laid out on the city maps—there were 40,000 square feet of land which I have valued at $10 a square foot, $400,000. And there was a bulkhead of 198½ feet, which, together with the under-water rights, I valued at $800 a linear foot, $158,800; making a total of $1,786,800; and to that I added for the element of plottage 12½ per cent, $223,350, which made the total calculation $2,010,150, and I said in round figures, $2,000,000. All of the property is water-front. The westerly side had a frontage right on the Hudson River (witness shows on diagram). This dia-
[fol. 1097] gram shows a section to the west hatched—that is water. This shown in solid blue (indicating) is filled land. The portion that is hatched is land that is under water. That is a pier which was used for coal handling, and that is bulkhead (indicating). As to the use to which the property might to devoted, I gave it some added value by reason of the fact that it was water front property, and of course, I considered in valuing the property, its location on important streets, and the fact that it had water front. I did not attempt to separate that by saying if his did not have water front, it would be worth so much, and with it it

was worth so much, and therefore there was such a dif
ference. I did not attempt to do that.

I considered that it could be very likely used for in
dustrial purposes. 42nd Street might well be used fo
tenements and stores. It could certainly be used for stores
I know that I have on two or three occasions personall
had people come to see me and ask me if they could ren
portions of that 42nd Street front for stores. One ma
wanted to take quite a stretch of that and make a restauran
and I have had two or three fruit men who came in there
I do not remember what another man was in there for. H
just wanted to know if it could be rented, and I said no
That is what I met with in some negotiations, so I will hav
to tell you no.

Twelfth Avenue is a practically closed street in her
You can pass around the end of it, but it is not an ope
street. This land in the bed of Twelfth Avenue is in th
possession or was in the possession of the Gas Company a
[fol. 1098] the time; but you can go around through ther
I think it is not called open to the public, and the only rea
son why anybody may pass around there is because the Ga
Company allow them to. That is what I understood.

In arriving at my valuations I was informed the Ga
Company owned the bed of Twelfth Avenue. I got that i
formation long ago from somebody in the Gas Compan
I am not sure whether it was Mr. Gilbert Francklyn, of th
Gas Company—or from whom. It is a number of yea
ago, and in this particular instance I was asked to apprai
that a- being in fee.

I think Eleventh Avenue is 100 feet wide at Block 108
There is no difference in my units as between Eleven
Avenue and West 42nd Street, not in that block. All
42nd Street with the exception of a distance of 100 fe
back from Eleventh Avenue, I called that a corner
Eleventh Avenue and 42nd Street. The unit being t
same, it made no difference, in my calculation. Both co
ners are fronted on Eleventh Avenue, and on 42nd and 41
Street running back 100 feet.

I had a sale in the block between West 36th Street a
West 37th Street, betwen Eleventh and Twelfth Avenues
December, 1912, Webb's Academy and Home for Shi
builders to the New York Central and Hudson River Ra

road. That was 197 feet 5 inches on Twelfth Avenue and 592 feet deep, and it carried with it the rights to the land under water between the west side of Twelfth Avenue and the bulkhead line. I did not have anything to do with that sale of it. The New York Central and Hudson River Railway bought it.

[fol. 1099] Of course I know that there has been quite a steady increase in the value of water front property in the meantime. The speculation that we had in water fronts during the war period had that effect. They had their highest prices during the war period. During the war period, they lifted the price of water fronts all along the port of New York very much higher than they were in 1912, but it would be some evidence of value if you found that a tract of that sort sold for a certain price, to show that a better located piece in some respects would be worth at least so much, and because of the increase it would be worth more than this piece. But it would give some measure of a guide for values.

The property on 36th and 37th Streets was used particularly for railroad yards at that time. It was sold in 1912 for $1,000,000. I got that information from the Record and Guide, and I believe that I proved that also by Mr. Spear of Brown-Wheelock's office, who had something to do with the sale. I would not say that the prices of water front properties around the City of New York had receded since the war ended. There has not been an active demand, and yet we sold recently a piece of property over on the west bank of the Hudson, on the Jersey Side, at the highest price we obtained yet, which would indicate that the prices have not fallen much. There is also a sale—we did not make the sale, unfortunately—but there was a piece at Bayonne, which I appraised, which was sold to the Royal Dutch Shell, and it was sold at probably 45 per cent more than I figured it would be sold for. The difference, however, in that case, I concluded to be because the Royal Dutch Shell could use [fol. 1100] tankage and pipe lines on the premises, which I had eliminated from my calculations, stating that I did not like to appraise a property for sale which was limited to one particular use for the value of the buildings. But the land itself, taking the land and what the owners considered to be the value of the improvements, it would sell

at a higher price than anything that sold there in F
onne. Now, those are sales which have occurred in
years. There are two sales on the Staten Island Soun
plants that will indicate a higher value for the land t
was obtained in 1919 or 1920 or in 1918.

In the Dutch Shell transaction, the price was far o
what I would appraise the fair market value of the pr
erty at, because it came in to me for an expression of op
ion from our sales force, and I made the statement that
the face of comparative sales of land, the highest price t
might expect to get for the land would be so much; that
value of the improvements on there I considered as
being of any great amount, because ordinarily almost
purchaser of water front property would want to rem
them, but he was lucky enough to find a purchaser t
wanted to use his oil tanks and pipe lines.

There was another sale in 1913 on the block between 3
and 36th Streets, Eleventh and Twelfth Avenues, a plot
feet 6 inches on Twelfth Avenue, 675 feet deep on 3
Street, 800 feet deep on 35th Street, irregular on the e
erly line, together with the water rights of 196 feet exten
to the exterior line of water grants in the Hudson Riv
The Mars- O. Roberts trustees sold that to the New Y
[fol. 1101] Central & H- — Railroad Company. The t
consideration was $1,091,920. That information is ta
from the records and corroborated by inquiry from
brokers, for at the time just prior to the sale. That
used for railroad purposes. And since then for the sa
purpose. It is still a freight yard. It is used for frei
yard purposes. They had their bridges. That was in 19
I consider it to be very helpful for the valuations tod
I believe I had no other sales there since 1913. Of cou
we have had the condemnations of the land between 4
and 46th Street—a matter, however, which I have not b
able to entirely unravel to make it useful for me. That i
matter that has been going on for over five years. As
as the gas companies gas properties, I believe they h
been wound up. I have not seen the commissioners repo
but, I do know something about what they were speaking
at the time. I have not just got at the basis of all that so
to use it for calculations. I think those are all of th
touching on the Hudson River.

I think those are all of them touching on the Hudson River.

Referring to Sheet 3 with reference to the bulkhead there, Lot 7 of Block 991, there were a number of sales of bulkheaded property that I once looked at. I would say that in last year—well, the matter was closed up this year—that is our office, the office of Joseph P. Day sold the water front at 14th Street between Avenue D and the east side of Tompkins Street with wharfage right—rights under water to the east of that—that block being between 13th and 14th Street, for the Mastic Dock Company. In that particular case we sold bulkheads land under water. That was last year. I had to apprais- property, being retained by the [fol. 1102] Mastic Dock Company to testify as to the damage to the property which would result through the taking of that easement under the land for the 14th Street tunnel. Before that matter came to trial, the New York Edison Company negotiated for the purchase of the property. The Mastic Dock Company sold that piece to the New York Edison Company, that was this year. I haven't the exact date. It was just closed up this year. I think the Mastic Dock Company acquired the piece back in 1904. They leased the property. A coal yard that occupied the Avenue D front, a lumber yard and a brick and sand contractor. Those two had the 14th Street frontage. That piece took in all the blocks, though, from Avenue D, 13th and 14th Street, to the foot of 14th Street as it is now filled. It would project a little further out into the river than the bulkhead which is shown on this Gas Company's property.

Tompkins Street is a street which I have been informed and have always believed had been abandoned by act of the Council, the Mayor and Mayoralty of the City of New York. They wiped that off the street map. It runs below 14th Street. I think we do not hit Tompkins Street as a traveled street until somewhere around Rivington Street, a crosstown street down in that neighborhood, running east and west. I am not sure just at the moment, that it terminates there. I know it runs north from Grand Street for a little distance, but I have forgotten just how far north that does go. East Street runs down to Rivington Street along the river front beginning at Grand Tompkins street [fol. 1103] carries along. Tompkins Street was planned as a waterfront street and just at the moment I am a little hazy

just where it was cut off, but I know it was planned to
tend out across 14th Street, I haven't an atlas, but I k
it is down below 10th Street, but just where it begins at
moment I am a little bit in doubt about.

The price at which the Mastic Company sold to
Edison Company, the property was $565,000 and there
a little question in there as to just what the title of the
of Tompkins Street was and an agreement was made
if the Mastic Company could not deliver a salable titl
the Edison Company, why they were to take off $6
from the price. It has not been used yet. It was only
quired a short time ago and they have not done anyt
with it. I understood it was to be used for the purpose
the New York Edison Company. I do not know wheth
was to be taken for a power house or not. I know they
interested in the report of the drillers, who had made
port to the Mastic Company about the condition of the
under water as regards bearing capacity for heavy s
tures. The price of $565,000 was reported to me by
Eskell of our office, who consummated the sale; also by
Francis B. Roberts, who I believe was one of the office
the Mastic Dock Company. I do not know what the
erty was assessed for.

In 1923 I was requested to make some little examina
of the waterfront properties, and I picked out a few
that were not—well, a sale in May, 1920, on the north
of East 32nd Street, 151 feet bulkheaded with all wha
rights. The sale was a half interest for $95,000, w
[fol. 1104] would make a total sale of $170,000. That
something about 150 feet in depth, 151 feet on the
head. There were some buildings on that which I appr
some years ago, I think at $70,000, and that left the
with about 17,000 square feet of land, with the bulk
at about $6.00 a square foot. In 1906 you find a sa
bulkhead with wharfage rights, 72 feet on South Str
Block 246, of $40,000. I worked out that to be $600 a
foot for the bulkhead, 72 feet on South Street, going
towards Fulton Street.

There have not been much bulkhead properties to b
on the river front for a good many years, the city h
been acquiring them for a good many years, taking
over under the policy of having the waterfront own

the City of New York, and it is only an occasional piece that one can find transferred in recent years. The city had acquired a good deal of this waterfront before 1912.

I would take a sale made on South Street in the neighborhood of Fulton as far back as 1906 as a guide for present value. You would have to go back and find out what had been paid for bulkheads and in the case where transfers are very infrequent, one has to take them where they can get them. Waterfront property on the East River, on the Island of Manhattan, is not a common subject of bargain and sale. It is not to be had and the City takes its time about going ahead and acquiring them. There are a couple of sales—I do not know just at the moment. In 1901 you find a sale by D. Barry to New York City of a strip of land, [fol. 1105] in what would be Jackson Street, if it were extended beyond South Street, 25 feet by 181 feet, in which the consideration is $25,000. That sale was to the City of New York. I think that they acquired that by purchase. That was near the Corlear Hook project. It was not acquired for that purpose. That was bought by the City I think just in the general policy of acquiring the waterfront along the East River, which has been the policy of the City of New York for many years. Part of that property has been changed over and the bulkhead lines changed and a portion of it is piled and bulkheaded. I think that comes now in touch with the Hecker-Jones flour mills, which is in the vicinity there. The Hecker-Jones flour mills is almost on the north of Corlear Hook park, near the end of Grand Street. This property is right at the foot of Jackson Street where old Jackson Street used to be, at the old Hook.

You will find a sale in 1904, Arthur D. Weeks to the Crane Company of a strip of bulkhead on Corlear Street on the east side, which would be in the bed of Front Street if Front Street were extended. It is 70 feet front and an indeterminate depth and is counted as a strip of dock with water rights. It sold for $29,000. They speak of it simply as a bulkhead with water rights. That runs about $400 per front foot.

In 1905 you have a sale on East Street opposite Broome and running up to Delancey Street Bridge, a property of 245 feet of bulkhead. The New York Terminal Company

to Clarence T. Burkett, for a consideration of $9
That was 245 feet frontage, with bulkhead. That is
$350, per linear foot.

[fol. 1106] In 1907, on Tompkins Street, at East Ho
Street, 116 feet of bulkhead, with all title to land
water, sold by A. D. Julliard and Fred H. Cossett, s
them to Morris Weinstein for $14,000. I think that
stein was glad to get rid of it, and let it go. I do not
he ever made any use of the property. Weinstein
speculator and I know I had it for sale from him a
time and he wanted something like $50,000, which is
a number of years ago.

Julliard was connected with the Quintard Iron W
The Iron Works had its business there at one time.
probably were just cleaning up the old Quintard Work
Weinstein purchased this little strip of bulkhead
them. He speculated in it and finally got so that he w
to let it go. It had not made him any money.

I have told you about that sale on 32nd Street.

In 1917 there was a sale on the East River from
Street to East 44th Street, 175 feet on 43rd Street a
feet on 44th Street, the river front being broken b
the land lying there takes a sharp angle, about in the
of that block. That was sold for $325,000, John L. Wi
and others, Executors, to the United Dressed Beef
pany. That was bulkheaded and filled. The Long
Railroad Company had a freight shed on there, and
was a cattle pen on there, in the block where the
Butchers are. There would be about 200 feet of bu
which at $500 a running foot would be $100,000, a
would leave $225,000 for the filled up land, and tha
tained about 30,000 square feet at $6 a square foot or
a lot as approximately the value on 43rd Street a
Street of the land only. You can work it around th
[fol. 1107] way, and it is $10 a square foot for bulk
and filled waterfront land on the East River.

In 1920 there was a sale on the East River of la
bulkhead from 47th to 48th Street, 70 feet on 47th
102 feet on 48th Street, all covered by a one-sto
storage shed. It sold for $200,000. The building o
was worth about $20,000. That would leave $180,
the land, and it contained about 18,000 square feet

would be $10 a square foot for the bulkhead and filled land on the East River. There was about 200 feet there of bulkhead.

In 1923 there was a sale on the East River and East 48th Street, 162 feet on 48th Street, 100 feet on the River, bulkheaded and filled, and a five-story brick factory. The factory in that case was worth about $75,000. That property sold for $210,000, and taking the factory away leaves about $135,000 for the land, 16,200 square feet, about $8 a square foot. I had appraised the building at one time, I looked at it, so I know about what it is worth. I figured that bulkheading along there from making inquiries for the bulkhead and the land under water I generally allow about $300 a running foot. In this instance I have done the same thing. I expressed that opinion on it at one time, five or six years ago when our office had it for sale and were working on the sale of it.

In 1922 our office sold the property of the American Malting Company, East River 63rd and 64th Streets, running back to Avenue A, with a variety of buildings, five-story, ten-story, twelve-story buildings occupied by a malting house, and a two-story office building and a two-story [fol. 1108] stable and a one-story shed and another little two-story storage house. The buildings were built for a special purpose, and when I was asked to put a value on the buildings I said that despite the cost of reproduction, which in my opinion would have been at least $350,000, that they could not add above $100,000 to the value of the land, because they were special buildings used in connection with the brewery, and the brewery business and the breweries being rather out of commission they would not be particularly salable.

I appraised the buildings there. I looked them over and said they could be used possibly for some sort of rough storage. A certain number of them would in all probability have to be cleared off and something else put there. Some of them might be used for some storage purpose because they were heavy construction, and I added $100,000 for their value to the property and thought that would be a pretty good allowance. I might say I have had occasion to appraise three or four malting houses now, and I have never

given very much added value to the land because of h
malt house on it. They are peculiarly constructed.

I am appraising them on the theory that some p
of them can be used for storage purposes. The malt
have low ceilings. You might knock out one floor an
a single story of what is two stories of a malt house. I
instances the malt houses, nearly all of them, hav
open spaces in the center which might be bridged ov
spaces might be made out of them. The walls are
solid and carry very heavy weights, so that they adap
selves in certain lines to certain rough purposes.
[fol. 1109] was a bulkhead on the 63rd and 64th Stre
that ran on a slant, I suppose there were 240 feet
head. I advised our Sales Department about it. W
sale was under negotiation they asked me if they o
advise the trustees of the Malting Company to make
and I said, "Why, certainly; if they don't take that t
liable to wait for ten years before they ever get
chance. Tell them to clean it up." The whole s
$475,000 I figured that the bulkhead was worth abo
a running foot. I considered in making my valu
piece of property on the East River, 103rd and 104th
in which I figured out a lease of the bulkhead and
figure of $300 a linear foot for the bulkhead, wit
rights, in determining the value of the lease, and I
that value as additional value to the land in back of t
head, being requested to make the division in that
I used a valuation in there of $300 a linear foot f
head in order to determine as a basis on which to e
the value of the leasehold. That was in 1922. The
about 200 feet of bulkhead.

I think those are practically all the sales there tha
sidered. There were some little sales up in the
River, but they did not afford very much light.

In regard to the transaction between the Mast
pany and the Edison Company all of that property t
bulkheaded. I did not give my appraisal per runn
of bulkhead there. For the purpose for which I
[fol. 1110] praising the property I marked it out
basis of $20,000 for a lot including the bulkhead, w
back something like 140 feet from Avenue D to t
head line, and I simply put a square foot value on th

—requested to work it out in that manner. I put a square foot value on all of that land and did not attempt to separate the bulkhead. Marginal Street shown on Diagram 3 on which Lot 47, Block 991 abuts is 50 feet wide. There is a right of way over the street. It is not a continuation of Tompkins Street.

The values of water front property shade off as you go north up the East River.

Speaking of the parcels on Sheets 3 and 7, there is an element of value in addition to that which I have placed upon the properties embraced in these blocks to a concern such as the gas company, having a necessity for land in contiguous blocks in order to conduct the operation of the plant or business with greater economy than it could if the operation was to take place with portions located in different blocks, separated from each other. By that, I do not mean that there is an added element of value by reason of the fact that the gas company owns the parcels in the contiguous blocks. I mean that these three or four parcels shown on Sheet 3, that a large concern requiring more space than can be found in one block would pay an additional value in an adjoining block over what they would pay for land with every other equal advantage but located [fol. 1111] two blocks or three blocks away from this one piece, because in this particular case the economy in operating over contiguous blocks would be a very considerable amount, and that one concern would find additional value in the matter of being on contiguous blocks. When these blocks cease to be in one ownership, of course, that added element of value because of contiguity would be lost.

I will say that the added element of value is there with the streets traveled and in public use, as they are. I would say that to a gas company or the Edison Manufacturing Company, or some other concern of that sort—possibly if it were in the days when we were all building warships, or one thing and another, if a ship concern had been located on there and wanted a large amount of space and had to move from one year to another, any concern of that sort would have given more for the block adjoining the one on which they were located, or would have given more for three blocks adjoining than they would for three blocks separated each from the other by one intervening block,

say. It is not a fact that that added element of value exists only in the case where the streets which separate the property from the contiguous blocks are closed, that is to say, closed to the public. Take for instance, the Bush Terminal in Brooklyn; in some instances they have a block on one side of the avenue and then cross over to the other side. Now, it would be much better for handling of property, and in a great many instances they could easily [fol. 1112] bridge; you know, the mere fact of a street being traveled would not prevent a manufacturer from connecting his upper floors. There is a very reasonable expectation that he would be allowed to bridge a street and so connect his processes from one end of a factory to another, right over the streets, provided he got permission of the city to do it, and paid for it. I notice that there are buildings where they bridge the streets over, streets, that are much more important than Avenue D and Avenue C. Our friend Wanamaker bridges over rather a more important street than that, and we expect that Gimbel and Saks will be united by bridges.

It is also possible to get underground rights for a concern requiring large space, greater than can be found in one block, the fact of the economy of operation would make the adjoining lot more valuable to him than it would be to the ordinary individual. That is to say, take the block on the water front, the Exterior Street to Avenue D., Marginal Street, if you take the next block to the west it is quite certain that you could operate from the river on to this first block and from there, because of the comparative light travel along Avenue D I believe it would be perfectly feasible to obtain a permit to bridge across Avenue D and operate for the receipt of material, or to ship by water, so that you can operate from one plant right straight through the other and that would be an element of very great advantage to some large concerns. And if you had to skip from 15th Street up to 17th Street to get another block you probably could not cross in any way, shape or manner. [fol. 1113] I have seen the parcels shown on Sheet 3 for the purpose of making my appraisal a number of times, prabably 20 times from 1912 up to date, and particularly sometime around October or November in 1923, and I looked over some properties down in there, I think it was about May, 1923, and I am in this particular neighborhood

frequently. I have known the property since at least 1912 and quite a number of years before that. During the period of my acquaintance with the property I have never seen these properties bridged over across the intervening streets and they are not so bridged now.

Cross-examination by Mr. Chamberlain:

I made an examination of these properties in 1912, that I am sure of, but I had seen them a number of times before. I examined a part of this property in the year 1908, yes, for the City of New York. I was engaged at that time by the City of New York to appraise a portion of this property. I did not appraise it all in that time, but I had at that time to look over the entire holdings of the gas company at this point at the request of the Corporation Counsel in order to observe the relation of the particular piece that I was supposed to appraise at that time, together with the rest of the gas company's property. It belonged to the Gas company at the time I appraised it. The City of New York at that time was going to take the block, 15th and 16th street, Avenue D and Marginal Street, for the Willard Parker Hospital, they were going to condemn it, and I was asked by the Corporation Counsel to examine it and make a report and accept a retainer as to their expert witness. That was vacant land I appraised. Of course, there were [fol. 1114] buildings of the gas company surrounding it, but the particular piece I appraised was vacant. I did not appraise any properties at that time which had buildings on them. I am not certain but there was a little shed on this piece that I appraised, but no buildings of any importance that I would give any market value to. I have at other times appraised property for the gas company. Our office has been their sales agent for some few years past and made a great many sales for the gas company, and I presume that I have expressed an opinion every time any of their property has been sold, either to the gas company or to our sales force. Our transactions have been largely vacant properties, land only.

I do not recall at the moment whether there were any cases where I appraised both land and building, unless possibly I think there was one on 18th Street, an old experimental building of the gas company which I gave some

little value to because it could be converted into a garage, it was just a nominal additional value, not based upon its reconstruction cost, but I believe I did say that it would have some additional value over the vacant land. I think that is the only one of them on which I have appraised buildings.

I am familiar in a general way with the tract of land purchased by the gas company at Hunt's Point shown on sheet 20 of Exhibit 258. I did not appraise that property.

Referring to a property over the East River, on which I valued the building at $75,000 and the land was worth [fol. 1115] $135,000, making a total of $210,000, I got at the value of the building and the value of the land in that case by examining the buildings; and made some calculations on them. This was not brewery property, it was a grain elevator.

[fol. 1116] April 15, 1924.

Met pursuant to adjournment.

Henry M. Brundage, a witness in behalf of the plaintiff, resumed the stand.

Direct examination (continued) by Mr. Ransom:

The revenues from all other sources than the sale of gas are accounted for in the following way:

The sale of appliances is handled by us as a merchandising proposition, appliances, being bought from manufacturers, placed on our exhibition floors and sold either for cash or on installments.

On the rental appliance, we rent appliances to our consumers, and they are similarly bought from manufacturers and are rented to the consumers at any time in the year they care to apply for them.

As to both the sale and the rental of appliances, the facts are reported in the monthly reports from the commercial department branch offices.

The company also has revenue from the sale of residuals. Residuals from gas manufacturers are sold to people who handle those commodities. They are sold under contract

at stipulated prices, as set forth in the contract, deliveries being made at our various manufacturing stations.

All deliveries made from any manufacturing station, of any residuals, are sent to the Accounting Department in the shape of documents which we know as charge tickets, which indicate that on a certain day a certain quantity of a certain material was delivered to a tank boat or a barge, and that goes to the Accounting Department. The Accounting Department thereupon determines from the contract on file in the Secretary's office the price to be charged for these commodities.

[fol. 1117] These charge tickets signed by the Superintendent of the Station delivering the goods, become the basis of charges against the dealer and corresponding credit to residual stock. The purchases of appliances are accounted for in the course of our business, in the Gas Appliance Inventories in which are listed all appliances purchased.

Upon the purchase of appliances we get receipt vouchers similar to what I have described with respect to the purchases of either material. No material can be paid for by the company without a receipt voucher from the department which received the goods, signed by the superintendent. When those receipt vouchers for appliances coming into the company are received by the Accounting Department, they are matched against the sundry creditors', the dealers', the manufacturers' invoices, as a part of the supporting data on which to approve that bill for payment, and that is charged to a gas appliance stock account. Record is maintained in this detailed inventory of the receipt and disposition of every gas appliance purchased.

[fol. 1118] Semi-annually we have an actual account taken and adjust our books for the variation between the price paid and the price sold, and the excess goes to the account given us by the Commission known as Gas Merchandising and Jobbing Revenue.

And the difference between the selling price of all the appliances sold and the cost to our company of all the appliances sold is deducted from what would otherwise be the cost of making and distributing gas.

During the years 1922 and 1923 we had contracts for construction work with contractors who were employed to do work or furnish materials for the Consolidated Gas Com-

pany other than coal and oil, pipe and specials and appliances.

There are two kinds of contracts under which construction work is performed for the company. If it is a lump sum contract under which a certain contractor undertakes to do certain work for a specified sum, the Construction Department of the Company looks after the field work. They have inspectors and engineers going over the work day by day and periodically, and most of those contracts provide for monthly payments. The field engineers turn in to the engineer of construction a statement of the work performed during the month, and that results ultimately in a report from the engineer of construction, signed by him, in a document that we know as an engineer's certificate, certifying that up to the end of the month a certain percentage of this contract has been completed and the payment of a certain number of dollars is now proper to be made. That goes to the Accounting Department, is classified in accordance with the work to be done, charged to the proper capital accounts, and is then passed to the Treas-
[fol. 1119] urer for payment. No payment would be made on a lump sum contract without an engineer's certificate supported by field engineers' reports.

A cost plus contract requires that we shall determine by an inspection of original data in the contractor's office that he has actually expended the money for our account that he placed on the bills, and we therefore have an organization of field auditors operating under the Secretary, and when a bill comes in, in addition to the engineer's check, we send these field auditors to the contractor's office and require him to produce all his original documentary evidence as to every penny he has expended for our account. When they have finished that, they prepare a certificate that they so investigated his accounts, that the labor was performed as shown by his payroll records, that the rates he charges were paid by him, that the material purchased for our account [fol. 1120] was paid by him, and they send that to the Secretary's office, who then approves it and passes it to the Accounting Department, and it goes through the same routine thereafter as on lump sum contracts.

As to the procedure in regard to accounting for work done by the Construction Department of the Consolidated

Gas Company for its own requirements or for the account of any of the affiliated gas companies, that question rather resolves itself into two factors. The Construction Department maintains a force of field inspectors and a drafting room, all those men being paid on weekly payrolls, and their time, devoted to the use of any company other than our own, reaches the Accounting Department in the shape of a charge ticket, upon which a bill is rendered to the companies for which the work was performed. That is done automatically as fast as these tickets come in.

Any work that is done for another company is billed by our Accounting Department. And that appears in the ledgers concerning which I testified yesterday.

Now the other factor is the overhead of the Construction Department, consisting of the Engineer of Construction and his assistants and his personal staff, including Mr. Alrich, Mr. Hunter, their stenographic force, and a number of subordinate engineers.

Mr. Morris is Engineer of Construction. The services of the Engineer of Construction and his assistants and their staff are charged to a capital account in the uniform classification of accounts called Engineering and Superintendence. They are carried there throughout the year, being charged each month.

[fol. 1121] Outlays made in the first instance by the Consolidated Company under the head of Engineering and Superintendence, but which are in connection with construction work for some other company, are carried in the capital account until the end of the year. As soon as the annual Public Service Commission reports of all companies are available, we determine from an inspection of those reports the amount of construction work that they have performed during the year, and we then apportion the engineering and superintendence charges over the companies for which work was performed, in the ratio of their capital expenditures to the total expenditures of all the companies, as reported to the Commission, and credit the capital account Engineering and Superintendence. These capital expenditures of each of the companies have been currently filed with the Commission month by month as well as embodied on an annual basis in the annual report.

So that services in the nature of engineering and superintendence in connection with construction work for other companies are billed to them annually for what we call the overhead of the department. The regular charges going through week by week for these men on the drafting force and on the field force we charge right along every week.

When we have billed to other affiliated companies any quota of engineering and superintendence in connection with construction work for their account, we allow the balance to remain in the capital account as it represents engineering and superintendence for our own work.

Every bill has to go through the Accounting Department. [fol. 1122] Checks are all signed by two officers of the company, each representing a different department.

With respect to the issuance of checks, when the sundry creditors' vouchers have been prepared and passed through the auditor's office, they are sent to the Treasurer who thereupon proceeds to pay them in accordance with a very well established routine. Payrolls, petty cash vouchers, discount bills, have to be paid promptly. Our general sum of sundry creditor's bills are paid between the 15th and the 20th of each month.

Sometimes a bill is sent to the Treasurer's office for a check to be drawn without going through the routine I have prescribed in the Accounting Department, but, not as a general practice. There might be a special payment that had to be made promptly, which would be approved by an executive officer.

Our sundry creditor's vouchers for 1922 were about 27,000 to 28,000 and for the year 1923 it has grown to something like 31,000.

In addition to the sundry creditors' bills there were thousands of payrolls and expense vouchers and inter-departmental transfer vouchers.

[fol. 1123] As to the number of the documents and records making up what you may call underlying or supporting data, such as the weekly time records and the vouchers representing inter-departmental transfers and cash coupons for payments made by consumers, I should say that the list would involve millions of vouchers.

There is not more than one set of books of account kept

by the Consolidated Gas Company, books of account which I produce here and which have been marked for identification constitute the only set of general books of account kept by our company.

Each book which we have produced and which has been marked for identification, and concerning which I have testified, has been kept in the regular course of business of the company. No entries have been made in any of these books by any persons other than employees in the Accounting Department of the Company working under my supervision and direction.

From 1903 to the present moment I have been in direct charge and have had direct jurisdiction over the accounting records of the Astoria Company.

[fol. 1124] The books and the records of the Astoria Company have been kept in the same manner and pursuant to the same method under the Uniform System of Accounts and under the same course of business as I have testified in respect to the books and records of the Consolidated Gas Company.

During 1922 and 1923 and theretofore the general books of account of the Astoria Company were a General Ledger, a General Ledger Balance Book, a Journal, a Construction Ledger which is in their case divided into two ledgers; an Accounts Receivable Ledger; An Accounts Receivable [fol. 1125] Balance Book; an Accounts Receivable Blotter; a Sundry Creditors Ledger; a Sundry Creditors Balance Book; a Voucher Record; Payroll Summaries, and a Cash Book.

Each book has been kept by that company in the regular course of business as described by me and under my supervision. No entries have been made in any of these books by persons other than those working in the Accounting Department under my supervision. Those are the only general books of account which are kept by the Astoria Light, Heat & Power Company.

The books and records of the Astoria Co. have been furnished to the representatives of the Attorney General on request, and have been inspected by representatives of the Commission at various times.

The situation with respect to the supervision of the Com-

mission over the Astoria books of account is similar to that which I have described as to the books of the Consolidated.

[fol. 1126] We issued a permit to representatives of the Attorney-General with respect to access to the accounting records of the Consolidated Gas Company and other gas companies, August 15, 1923. I do not recall specifically issuing an order to Astoria. But access to their records was permitted. These permits were issued to fourteen accountants.

Likewise, pursuant to Judge Winslow's order, we issued on August 15, 1923, a permit to the superintendents of the various manufacturing stations, holder stations and other [fol. 1127] engineering departments of the Consolidated Company and specified affiliated companies, to engineers accredited to the defendant Attorney-General.

Referring to the years 1922 and 1923, there were two ledgers Nos. 5 and 6 kept in the manner which I have described by the Astoria Light, Heat & Power Company, covering that period.

Astoria has in round figures around thirteen or fourteen hundred employees, and it may be said that the time slips will be about half of the Consolidated's. That is, on the manufacturing side the volume is much larger.

The Voucher Record of the Astoria Company shows the number of vouchers. I constantly personally pass on classifications of expenditures for the Astoria accounts. That is true with respect to the classifications in all of these Astoria books that are here. I would say that I am in a little closer touch with Astoria than I am with the Consolidated.

Question by the Master: The same method (in the Astoria books) with regard to data as to purchases and the use of oil and gas, the amount of payrolls, etc., is pursued?

A. Yes, your Honor, exactly the same procedure.

Coal, oil, labor and materials, are handled in the same way by the Astoria Company, in which I testified as to the Consolidated plants.

(The witness then described the general books and records of the Astoria Company, which were received in evidence as Plaintiff's Exhibits Nos. 727 to 753 inclusive.)

[fol. 1128] (The witness then described certain further books of account of the Consolidated Company, including general ledgers and operating ledgers, in which were entered expenditures by the company for capital purposes prior to 1922, which were marked Plaintiff's Exhibits Nos. 754 to 757, inclusive; also Sundry Consumers Ledger of Astoria Company, marked Plaintiff's Exhibit No. 758.)

[fol. 1129] Cross-examination by Mr. Donnelly:

I said on direct examination that some of the affiliated gas companies came in to see me about the annual reports to the Public Service Commission.

The time spent on these conferences with the affiliated gas companies relative to the makeup of their reports to the Public Service Commission is no infinitesimal I can't measure it, Counsellor.

It happens only once a year making up the report and I might spend half an hour or three-quarters of an hour on it. That has to do only with the annual report to the Commission. The monthly reports that the other companies and my own company make to the Public Service Commission of construction expenditures go along automatically. They have no occasion to consult with me about them.

These conferences deal usually with some specific question coming up. And that only happens about once a year.

All of the affiliated gas companies confer with me with regard to the make-up of those reports. I keep no record of the time devoted by me to those conferences. My duties as Secretary of the Astoria Company are the same duties as are impressed upon me in the Consolidated. Part of my duties as Secretary of the Astoria Company have to do with [fol. 1130] supervision of their accounts. I take part in the make-up of the Astoria Company's report to the Public Service Commission. I am paid a salary by the Astoria Company for these services. No part of my compensation for those services rendered by me to the Astoria Company is paid by the Consolidated Company. I do not receive any compensation for any services rendered by me to any of the affiliated gas companies. I can imagine a condition where they might come and ask me some specific accounting question outside of helping with their Public Serv-

ice Commission reports. But outside of some question which they may ask you relative to some accounting proposition, I am not engaged in any way on the affairs of the affiliated gas companies.

I am the Assistant Secretary of the Westchester Lighting Company. They do not pay me a salary. The Consolidated pays me a salary. I render no service to the Westchester Co. except to sign a paper once in a while. I have nothing to do with the conduct of their affairs and I am consulted very little by anybody connected with the Westchester Lighting Company affairs. There are other companies connected with the Consolidated outside of affiliated gas companies in which I am an officer.

At the present time I am the treasurer of the Northern Westchester Co. Lighting & Railroad Company. I render no services to those companies. I have no duties which have to do with the business of either one of those com- [fol. 1131] panies. I am not merely an ornamental fixture of these companies. They have assistant treasurers who carry on all the companies' routine, but they wish to have another officer here in New York for an occasional emergency, and they elected me. I have not signed a check since January 1, 1922. I have performed no service for either one of these companies since January 1, 1922.

The accounting force which keeps the books of the Consolidated Gas Company do not perform any similar services for any of the affiliated gas companies. Each one of the affiliated gas companies has its own separate distinct accounting force, which are not located in the general office building on 15th Street. Astoria has its, Amsterdam has its accounting force, and the Standard Gas Lighting Company force are in the General Office Building; the Central Union are in their own office in the Bronx; the Northern Union are in their own office in the Bronx and the Bronx Gas and Electric have their own force in the Bronx and the Queens Gas Company have their own offices in Flushing. The New Amsterdam and the Standard are in the general office building on the second floor.

No part of my time is devoted to the supervision of the accounts of the affiliated gas companies, except for Astoria. It is my duty to make monthly audits of accounts, as a member of the Auditing Committee of several of the other

affiliated gas companies. I am a member of the Auditing [fol. 1132] Committee of the Westchester Lighting Company, the Northern Westchester Lighting Company, *the Northern Westchester Lighting Company*, the Peekskill Lighting & Railroad Company, the New York & Queens Gas Company, the Central Union Gas Company, the Northern Union Gas Company and the New York and Queens Electric Light and Power Company.

My duties as a member of the Auditing Committee are the same as the duties performed by other auditing committees that I have already described. The same as the duties performed by the members of the Auditing Committees of the Consolidated Gas. I check their disbursements and confirm that they are made on duly accredited vouchers, and confirm the accuracy of their balance sheets and ledgers. I do that with respect to those companies I have just named, monthly. They pay me for the time so devoted by me. I do that personally. How long I am occupied on each of those monthly occasions depends upon the amount of disbursements that have been made. I should say an hour to an hour and a half for each company. That is confirmation that these companies have not made any disbursements except upon properly approved vouchers, passed by the duly designated officer of the company. The confirmation is evidenced by the attested vouchers. I do not go back of that.

The Consolidated Gas Company has a Committee of Accounts which requires me, as I testified yesterday, to pro- [fol. 1133] duce duly approved vouchers indicating that they have been audited by the proper officer of the company designated for that purpose. They do not ordinarily go back of the attested and approved vouchers for the purpose of confirmation of those vouchers, but any auditing committee reserve to themselves the right to at any time ask any question that they wish, and I can testify that in many cases the Committee of Accounts of my own company have required me not only to produce the attested voucher but quizzed me at very great length about certain items.

I have nothing to do with the financing of the Consolidated Gas Company or its affiliated companies. The matter of arranging for our finances was conducted and handled by our deceased vice-president, Mr. Carter, up to the

time of his death. Since then it has devolved I should say on the president, although there has been no definite policy to that effect established as yet.

As Secretary of the Board of Trustees of the Consolidated Gas Company my duties outside of keeping the minutes of the Board of Trustees are as follows: The By-Laws of the Company, impose upon the Secretary jurisdiction and supervision over all its accounting procedure. I also serve as Secretary of the Finance Committee and Secretary of the Committee of Accounts. As Secretary of the Board of Trustees, I do not take any part in planning of new construction.

[fol. 1134] When the Street Department is employed on work for the affiliated gas companies the record of the labor so employed is kept by the District Foreman of the Consolidated. It so indicates, to be charged to the Standard or the New Amsterdam, as the case may be. Those are the only companies for whom the Street Department does work. That is to say, it takes care of the main laying and the service-laying work for those companies and also the repairs to the mains and services. Outside of those companies, the Standard and the New Amsterdam it is not a fact that the Street Department does work for other companies.

It is not a fact that the Street Department of the Consolidated has done some work for the Consolidated Telegraph & Electrical Subway Company, as far as I ever heard. If, in connection with the prosecution of their work, some labor was required for account of the Subway Company, and our people did it, which I imagine might happen in some isolated cases, a charge ticket would reach the Accounting Department of the Consolidated Gas Company, and we would at once bill the Subway Company, and you will find a record of such entries in our Sundry Debtors Blotter. I do not recall any of those instances in that period which has elapsed since January 1, 1912, but the record speaks for itself.

The Consolidated Gas Company has a chemical department. Colonel C. A. Lunn is the head of that department. [fol. 1135] He has under him I suppose fifteen or twenty chemists. That department makes chemical tests of everything we use, buy or sell, including gas and oil and coal,

firebrick, fire clay and residuals. There is a tabulation prepared as a matter of routine of the salaries of those who are engaged in the Chemical Department, between the Consolidated Gas Company and its affiliated gas companies. During the two years in question, and for many years before that, charges were rendered to the Astoria, the New Amsterdam, the Standard, the Central Union and the Northern Union, and for eight months of 1922, to the Mutual Gas Light Company for the cost of maintaining our Chemical Department. The computation is worked out so as to pro rate over all the companies on the basis of the ratio of gas made by each company to the total gas made by all companies during the previous year. This is adjusted so as to provide for the distribution between coal gas and water gas in the ratio of four to one. In other words, the Chemical Department do about four times as much work in connection with the coal gas plant as they would in the water gas plant. That was the result of conferences attended by Chief Engineer Woods, Chief Chemist Lunn, Assistant Secretary Davidson and myself, [fol. 1136] to *to* work out a basis that was reasonable between the companies. That basis has been the method of procedure in making the apportionment, quite a few years. I would not like to say from memory. We have always charged the other companies with their share of that cost. This particular basis I should say from memory, was established anywhere from three to four years ago. That included everything of the cost of operating the Chemical Department, both labor and supplies and anything that they used. The head office of the Chemical Department is located in some part of the general office building. Their biggest laboratory is at Astoria works. The head of the Chemical Department has his office in the general office building. He has one or two clerks there, that is on the 17th floor. The Chief Chemist has an office and then a small office for his two clerks, as I remember the number.

The portion of the G. O. Building applicable to any particular department is charged to the incidental expenses of that department and, in making the apportionments amongst the other companies, for their share of maintaining any of those departments used for joint benefit, that incidental expense is included. That is included in the basis

I just read off a moment ago. That likewise applies to an apportionment of insurance on the building itself. In regard to the care and up-keep of the building, we have an account which you will find in the Operating Leger, [fol. 1137] called "Cost of Operating G. O. Building." That is a separate account which represents the entire cost, insurance and all those figures, that go to make up the cost of operating the G. O. Building, and that account is divided each month between the Operating Expenses of our own company and that which is applicable to the rented portion of the building occupied by the other companies. The portion that goes into our own expenses is shown in the incidental expenses of each of the various departments, some of which, like this one, is operated for the general benefit of other companies and when that apportionment is made includes the cost of operating the G. O. Building to any department.

I cannot tell you, out of my head, the amount in money that is apportioned among the Consolidated Gas Company and its affiliated gas companies and Astoria insofar as the rent and insurance on that building is concerned. I have prepared a table here of these various apportionments so I might be able to testify as to the bases. It can be worked out, but it is not worked out now so that you can readily turn to it.

See Plaintiff's Exhibit No. 715, which is Sundry Debtors Blotter, at page 476 and following, I note quite a number of entries which show charges to the Consolidated Telegraph & Electrical Subway Company, done by that company for the Street Department in November 1923. The [fol. 1138] charges embraced and included on those bills include labor and material. The material was charged at cost to the Consolidated, plus 15 per cent. The labor was charged at cost, as appears in the bill on page 476 of this exhibit, and is the same rate that the Consolidated paid its labor for the same character of work. We charged the 15 per cent on the whole bill, including the labor. There is not any division of that 15 per cent, between material and labor,—15 per cent for all, applying to material and labor and then the liability of insurance is $4.18 per hundred. My recollection is that the other gas companies are charged at cost the same as these items I have men-

tioned, plus 5 per cent., but I am not sure about that rate. Five per cent. is added to bills against the affiliated gas companies. I cannot tell who it is that determines the charges of 5 per cent. to the affiliated gas companies and the 15% to the Consolidated Telegraph & Electrical Subway Company, because these rates have been in effect for many years. I should say at least twenty years. I do not know what the reason is for the difference in the percentages for the two classes of companies,

The Consolidated Gas Company took over the stock of the Subway Co. from the Edison Company. A very good reason for the differentiation is that the Subway Company, [fol. 1139] for whom we do this street work occasionally, or the Edison Company, are not gas companies, and this Street Department is not maintained to assist those companies. The gas companies in Manhattan other than the Consolidated Gas Company have their Street Department operated by us and, in addition to those that I have just shown you at the 5 per cent. we require, we also bill them each month for the overhead expenses of running our Street Department. I just want you to understand the reason for the differentiation. I cannot testify as to who set the rates, but there is a reason for it, as I have stated. That is not an understanding; that is a matter of fact. I did not say I did not know the reasons for the difference in percentages, I said I did not know who set up those rates. I said it had been done for at least twenty years.

As to what is covered by the five per cent. plus that is charged to the affiliated gas companies, it might be called an allowance—that five per cent., and to tell you what it covers—there are some expenses that you cannot specifically allocate, fire insurance on the Street Department buildings, storeroom charges and upkeep of the buildings are included in the overhead and are billed for. We do not bill for fire insurance. We do not include in our overhead the contribution the company makes to maintain the Mutual Aid Society. We do not charge in the overhead the item of vacations, or occasional sicknesses—items of [fol. 1140] that nature, which partake of the expense of the maintaining of the Street Department for the joint benefit not specifically covered, may be said to be covered by this 5 per cent. The Consolidated Telegraph & Elec-

trical Subway Company is now a subsidiary of the Consolidated Gas Company. We took over that stock from the New York Edison Company, I should say, within six months. We do not maintain any storeroom for the benefit of the Consolidated Telegraph & Electrical Company. The work we do for them is purely incidental. The 15 per cent. covers items I have just spoken of, together with their proportionate share of the overhead of operating the street department. No recent study has been made by me to see what the five per cent. and the 15 per cent. respectively covers, or to see what the charges of five per cent. and 15 per cent. respectively are sufficient to cover everything that should be covered by those percentages.

[fol. 1141] As of January 1, 1922, the Consolidated Company had 514,706 consumers; as of January 1, 1923, 555,971 consumers, and as of January 1, 1924, 560,189 consumers. The figures of January 1, 1923 and 1924 included the number that we added by the acquisition of the Mutual Company.

Referring to the cost plus contract payments, I testified that some checking is done of the material on those contracts by what I described as field auditors. The field auditors are a branch of the Secretary's office. I have two men who do that kind of work, checking of purchases on cost plus contracts. I think I may have had in the last two years one or two cost plus contracts for work done for one or more of the Affiliated Gas Companies. The amount has not been sufficient to warrant any apportionment of the salaries of the Field Auditors. No apportionment has been made since Jan. 1, 1922. I think there may have been a few small jobs for other companies.

We have charge tickets for the work done by the field inspectors of the Consolidated Gas Company's Construction Department for other companies. These inspectors are a different class of employees from the field auditors.

[fol. 1142] They report to the Engineer of Construction. There is an apportionment of their salaries made between the Consolidated and affiliated gas companies every week. The reports of the Engineer of Construction indicates the company for whom they were doing the work and who it is to be charged to. The basis of the apportionment is the hours of services rendered. Those charges are not made initially on our books to Engineering and Superintendence.

These field inspectors and the draftsman, I testified yesterday, are charged directly each week according to the work they are actually doing.

Then over and above that, I testified that the overhead of the Construction Department, being Engineer Morris and his staff who are doing work for all of the companies, are [fol. 1143] charged to Engineering and Superintendence, and once a year it is spread over all the companies for which work was performed, based on the amount of construction of the previous year. The wages of the field inspectors are charged to the affiliated gas company upon the basis of actual hours employed by them on that work. Now, we have a general office construction organization known as the Engineer of Construction, Morris, Alrich and Hunter and all these engineers down the line who look after all the engineering work, construction work for all the companies. All of their salaries are charged to a capital account Engineering and Superintendence. It would be a difficult job to make that apportionment each month and we do not attempt to do it, but at the end of the year when the sworn P. S. C. records are compiled we take those reports and, based on the amount of construction work performed during the year, we apportion the engineering and superintendence, heretofore carried by the Consolidated amongst the companies that ought to carry their share of that load.

That does not include any apportionment of the salaries of the general officers. There are one or more of the general officers who have to do with the construction Depart- [fol. 1144] ment work, passing upon the executive policy of what is to be done. All the planning work of course is done by the Construction Department in consultation with the Chief Engineer. Mr. Vice President Addicks is the originating officer of the company by whom the policy of construction is determined, but all these plans and policies as to construction work are submitted to and approved by the company's executive committee before they can be undertaken. The fact that construction work is about to be undertaken initiates with any one of several men. Construction work, for example, would not emanate from the secretary's office. Mr. Vice President Addicks might have an idea that a certain construction project was the proper

thing to do, and that would emanate from his office. Chief Engineer Woods might have an idea that so and so ought to be done; Engineer of Construction Morris might have an idea that so and so ought to be done; Assistant Engineer Alrich, or Assistant Engineer Hunter, you can't tell—they emanate from the different minds of these man who are dealing with this end of our business. New construction would be first submitted, after some preliminary plans had been worked out, to Vice President Addicks. The Executive Committee of the company makes the determination [fol. 1145] whether the new construction work suggested by one or more of those gentlemen shall be actually undertaken. The matter as to whether or not the construction shall be undertaken is then discussed there. There are no salaries paid to our executive committee. The executive committee of the company is a committee from our board of directors, and they are not paid a salary.

Mr. Alrich's time is charged to construction. The basis of apportionment is apportioned on the basis of the amount of construction by each company. No part of Mr. Woods' salary is apportioned to construction. It is charged to operations. All of Mr. Alrich's salary is apportioned to construction. He does construction work exclusively. The total amount of construction work done for affiliated gas companies for the year 1922 are contained in the books thus far received in evidence, but not in any summarized form. I would have to work it out by a process of analysis, for each month. It would be quite a mathematical job to work out the charge to get the total for the entire year. You would have to go through the Sundry Debtors' Ledger and analyze everyone of the charges and pick out those that were for construction work and summarize them. They are not summarized. They are being made every month. Aside from these books I have not a record that shows the [fol. 1146] total for the year. The company does not keep a record in any summarized form. The work having been performed and the record having reached the Accounting Department, a bill is rendered and that closes the transaction. The annual report made by the Company to the Public Service Commission for the year ending December 31, 1922 does not give the total construction work done for affiliated gas companies during that year. So if I, as secre-

tary wanted to inform myself as to what the total was for construction work done for these companies during 1922 there is no book to which I could turn to get that information readily. I have no recollection of anything done during 1922 and 1923 for any other company except the affiliated gas companies. When I say affiliated gas companies I include Westchester. Westchester is a combination company, both gas and electric. Some work was done for Westchester during those years, and that was included in the proration.

During 1922 some 20,000 to 28,000 Sundry Creditors' invoices went through our accounts, and for 1923, about 31,000. I don't recall that I testified as to the number representing the rest of the vouchers handled, for I don't knew [fol. 1147] it. I did testify that there were hundreds of other vouchers in the shape of payrolls, petty cash vouchers going through our records, and departmental reports and interdepartmental reports, but as to the number I have no record. The Consolidated is in the gas business and it has a lot of sub-companies, outside of its affiliated gas companies. As to the vouchers which are handled by the Consolidated Gas Company Accounting Department embracing and including vouchers which relate to business other than the Consolidated Gas Company's gas business, a condition might arise under which a creditor would render an invoice for some service rendered, or for some material delivered, a part of which was for account of some other company. That might happen. Not for the New York Edison, but more likely some other affiliated gas company. There might be some service rendered for the joint benefit of one or more of the gas companies. Outside of the Consolidated and affiliated gas companies I can testify there are no such other vouchers of any of the other companies. [fol. 1148] In explanation of the procedure as to entries affecting retirements, the retirements of property with respect to station properties, for example, are made upon the approval of the chief engineer and the engineer of construction. The work is performed by the construction department, who supervise it, and a report reaches the accounting department from the engineer of construction's office to the effect that certain apparatus has been abandoned or sold, scrapped, dismantled, gone out of service, and when

that record reaches the accounting department they determine from their records the original cost of the property so withdrawn and thereupon make a withdrawal entry crediting the fixed capital account with the original cost of the property. The amount of this original cost, plus the cost of tearing the dismantled property out, less any salvage recovered, is charged against the reserve for renewals and replacements.

On January 1, 1924, under order of the Commission, the balance in the reserve was transferred to the reserve, entitled "Retirement Reserve," and the same procedure has been adopted since January 1, 1924, charging against the title of the new account.

The Standard Gas Light Company repairs meters for the Consolidated and its affiliated gas companies except the New Amsterdam and the East River Companies. The Consoli- [fol. 1149] dated Gas Company's Accounting Department's source of information for charges to the account "Repairs to Gas Meters" is a bill from the Standard Gas Light Company representing work performed by them each month. The Standard Gas Light Company renders the Consolidated a bill for repairs to meters. We pay the Standard Gas Light Company on the basis of the charges included in those bills. The bill has to be verified, but is the real evidence of work done. We pay the bill after we have verified its accuracy. The bill is checked by our Accounting Department.

We confirm that the number of meters indicated on the bill has been repaired during the month. The meters from our five shops are delivered to the repair shop to be repaired. A record is maintained by the shop of the different size meters that are sent there, and that record comes to the Accounting Department who maintain a cumulative record of the number meters that have been sent to the repair shops to be repaired. They also obtain from the shops a record the meters that have been repaired and returned to our shop, so that we have a check as to the number that have gone through the Standard repair shop. The rates to be paid for this work are based in the year 1923, we will say, on the actual costs to the Standard for doing that work during the year 1922. The bill gives all the detail as the [fol. 1150] actual amount of work done and the amount in

money at which the work is charged to the Consolidated by the Standard.

During the year 1922 it has been demonstrated that the cost of repairing meters was a certain rate for each size meter by each class of repairs, from the actual records of the Standard Gas Light Company, which we inspect and pass upon. The officers of the Consolidated Gas Company inspect and pass upon them. The year 1922 has worked out a certain price for each size meter for each class of repairs, and that is used as a basis for rendering bills during the year 1923, month by month. When the first quarter shall have elapsed the Standard submit their actual costs for those three months and thereupon either an additional bill or a credit memorandum is issued, being the difference between the 1922 cost and the costs for the first three months of 1923. There is a small variation and a debit bill or a credit memorandum is issued to adjust the bills for the first three months of 1923 to the actual costs to the Standard Company

By the Master:

They keep right on charging at the rate established in the first of the year. They start with the rate for the preceding year. At the end of every three months' period they adjust the bills as rendered, to the bills as they should be. The repairs are classified and the rate of charge for each class of repairs is established. We check the class of re- [fol. 1151] pairs performed on the various meters sent to the Standard Gas Light Company by sending our people to confirm their reports that the number of meters were repaired of the different classes and different sizes, and then we get a further confirmation of that by keeping this cumulative record in the Accounting Department showing that we sent so many meters and we got so many back, so they must have repaired so many. The records in the Accounting Department do not show the classification of the repairs by classes, your Honor. May I also have the Court understand this other feature: The cost of the Standard, is worked out so that they get a return of 8 per cent on their investment above their operating costs. Their operating costs are a known fact, and over and above that they get a return of 8 per cent on their investment in the

land, building and equipment, and that is worked out almost to a penny at the end of every year.

By Mr. Donnelly:

The meters are repaired by Standard employees, in a building located on First Avenue, between 110th and 111th Streets, owned by the Standard. Of course I cannot tell what material is used in repairs. I know in a general way, but that is an engineering, technical question that I would not attempt to answer. The repairs are divided into three classes, and the bill so indicates, with the rate for each class and each size, and that is indicated by the bill likewise. It is somebody connected with the Standard who determines the rates for those three classes of repairs. I don't know who connected with the Consolidated Gas Company made the determination of eight per cent return upon [fol. 1152] the property devoted to the repaid shop. I do know that is the arrangement. They must get 8 per cent on their investment.

By the Master:

It is the Secretary's duty, and I do it periodically, your Honor, to make comparison of their prices with the prices of other companies for similar work.

I compare periodically the cost of doing these repairs by the Standard as billed to us with what is would have cost us had we had them done by one of the meter companies who do that kind of work also. I have actually done it. I have some tabulations here made within recent times. The American Meter Company, for example, who are the big meter manufacturers, have a regular schedule of prices for doing all this kind of repair work.

By Mr. Donnelly:

I have no doubt they are published somewheres in some trade publication. I have many quotations from them. I ask them for quotations as to charges for meters by the American Meter Company. They would have the same classification for repairs as the Standard. That is an established gas practice, not only here but all over the country, your Honor, as to dividing repairs of meters into

three classes. I think I have the classes here in the record. It is a technical description that I would not attempt to answer from memory. I will show what the division is.

Class 1 consists of cleaning and grinding valves, repacking stuffing boxes, setting hands at zero, providing and painting, sometimes called cleaning.

Class 2 consists of cleaning and oiling diaphragms, cleaning and grinding valves, repacking stuffing boxes, setting [fol. 1153] hands at zero, proving and painting, sometimes called cleaning and oiling.

Class 3 consists of furnishing two new diaphragms, cleaning and grinding valves, repacking stuffing boxes, setting hands at zero, and proving and painting, sometimes called in gas practice two new diaphragms.

That is a standard classification that has been in effect in meter repair work for thirty years that I know of. Those classifications are the same classifications used by the American Meter Company. The New York office of the American Meter Company is on West 11th Street. They have quite a good sized factory there. I suppose they do repair work there. If there are any other meter companies in the City of New York who do repair work to meters besides the American Meter Company I don't know them. In other words the American Meter Company's prices are the only prices which I made any investigation of. I do that periodically; I make that comparison. I know that same classification of the different kinds of repairs is uniform. I did not check the prices of the Standard against the cost of doing the work when we were doing it ourselves. We have not done it ourselves in a great many years. A great many years ago we used to have a repair shop of our own at East 21st Street, but, that was given up, I should say, at least twelve or fourteen years ago. It has been done since then by the Standard Company at this repair shop at 111th Street. The New Amsterdam and the East River, have their own shop. As far as the Consolidated is concerned they have done most of our work. I don't know whether [fol. 1154] they come for them or whether we deliver them.

I have obtained quotations from the American Meter Company, what it would cost for repair work to our meters. The last time was the early part of 1924. I don't know of

any other meter Company there besides the American Meter Company of New York. That is the only one I know of here. I did not inquire as to whether or not there are any meter companies in reasonably close vicinity to New York City. Not any one individual connected with the Consolidated Gas Company determines when our meters need repair. A whole lot of people are charged with that duty. The District Foremen are obligated to see to it that the meters around the District are in good operating condition, and periodically under a Public Service Commission order we are obliged to change meters for age. In so far as the necessity for repairs to meters arises, that comes in to our company as the result of requests or information conveyed to us by those foremen. Meters are collected and sent to the Standard Gas Lighting Company for repairs every day in the year. Meter repairing is going on every day in the year. A gas company, like a river, never stops. It goes on seven days in the week.

This percentage that is allowed the Standard determined is a certain percentage that is added to the cost, which is included right in the unit price. When the meters are repaired by the Standard Company, they are returned to the various shops of the Consolidated Gas Company. Every [fol. 1155] meter that the Consolidated Gas Company owns has to be accounted for. It is either on the district, in the shop or in the repair shop, and the shop departments are charged with the responsibility of accounting for every individual meter. Somebody in each shop is charged with the responsibility of O. K.ing and approving the repairs made to the meters. The Public Service Commission tests all those meters.

I suppose that the sundry creditors ledger will tell the quickest, from whom, the Consolidated Gas Company buys its meters. We have bought meters from the American Meter Company, MacIlheny, McDonald & Company, the Maryland Meter Company, there may be others; The Superior Meter Company; and the Lambert, but not recently. I will answer specifically from the index to the Sundry Creditors Ledger. During the year 1922 we bought meters from the American Meter Company, the Superior Meter Company, and during 1923, the American Meter Company, the Superior Meter Company and D. McDonald & Com-

pany—that is all. I cannot say where the Superior Meter Company or McDonald & Company, are.

Our meters are bought as a result of competitive bids. Without being in close touch with the Purchasing Department in respect to the meters, I can say they are bought under a written contract, approved by the Executive Committee. My recollection is there have been several contracts where the requirements for the affiliated companies would be covered in one contract and then the meters delivered to the different companies as required. The Purchasing Department of the Consolidated Gas Company, where they conduct the details, makes the contract; the head of that is Mr. Macklin. The meters are not delivered [fol. 1156] to the shops or the storerooms of the Consolidated Gas Company in the first instance before delivery to the affiliated gas companies, but are delivered direct, from the manufacturers to the affiliated companies. They are likewise billed to the company who received the meters. Meters which are delivered to the affiliated gas companies are billed at the same price as those which are delivered to the Consolidated Gas Company. I found no evidence of any Griffin meters bought during 1922 and 1923. You cannot take a P. S. C. report and deal with all the meters belonging to the Consolidated Gas Company at the end of every year and then try to tell me they were bought from Griffin, because it is not true. Under the caption, "Bought during the year 1923" on page 48 of the P. S. C. Report, for the year 1923, appears a list where the Commission requires us to furnish a tabulation of all the meters owned at the beginning of the year, and they also ask us to give the type of meter, that is as to who made it, and I very properly gave in here the makers of all the meters owned by the company bought in all the years in previous times, to the extent of 11 different makes. There are none bought from Griffin in 1922 or 1923. No part of Mr. Macklin's salary is apportioned between the Consolidated Gas Company and its affiliated gas companies. None of the books which have thus far been received in evidence give the stock of gas meters as of January 1, 1922, January 1, 1923, June 1, 1923 and January 1, 1924 nor the amount on hand as of those dates. The books in evidence show the cost to the company of the meters at thos- different dates, [fol. 1157] but not the stock. We maintain a statistical

record that covers that. It is there in the P. S. C. reports. The reports to the Commission give the stocks on hand at the end of every year. The meters which are delivered to the affiliated gas companies are delivered by the shipper's own means of transportation. The price is f. o. b. at the shop. No part of our auto trucks or other vehicles have any part in delivering meters to the affiliated gas companies. All of the meters from every meter company are delivered at the various shops at their own expense. We do not set *set* meters for the affiliated gas companies. The affiliated gas companies have their own meter setters and their own meter readers and indexers and have their own shop*s* to take care of their own business.

Meters are capitalized at the time of purchase direct from the sundry creditors invoice. We do not change the capital account for a meter which is repaired and then reinstalled. The capital account with reference to that meter remains the same until such time as the meter is condemned and goes out of service, when the report reaches us from the shop that meter so and so has been sold, condemned or scrapped, whereupon we credit the capital account. The cost of repairs is charged against the operating account and the retirement of the meter is charged against a reserve [fol. 1158] established or that purpose.

Orders for gas appliances are placed through the purchasing department. I did testify that our appliances are usually bought in large quantities under contract, which is approved by the executive committee. Those appliances are frequently bought for the requirements of the affiliated gas companies as well as the Consolidated Gas Company itself, under one contract. They are bought from many concerns—I suppose two or three dozen. The contracts for the purchase of those gas appliances are made as the result of competitive bidding. Those by whom the appliances are supplied are many of them out-of-town manufacturers. I can give the list. Frank R. Barnitz, the General Superintendent of the Commercial Department determines the price at which the appliances are sold to the consumers.

Part of our operating expenses for the year 1923 covers and includes changes made in our gas appliances due to the change in standard. The amount of that expenditure is contained in Operating Ledger A, for the year 1923 and also for 1922. It is not in one figure. The amount that

was expended for changing the gas appliances because of the change in standard is not summarized so it is get-at-readily. It is in three or four accounts, because the Commercial Department and other departments may have something to do with that, and the amount is set up as the subdivision of those departments, indicating the cost of the work. All of that work was done by the Consolidated Gas [fol. 1159] Company's employees. I don't think they make the changes for the affiliated gas companies of the Consolidated Gas Company too. I would like to refresh my memory on that, but my recollection is that each one of the companies did their own work. I will verify that, if you wish me to, between now and tomorrow morning. I cannot tell you now much that expenditure amounted to in 1923. It is set forth in our records in such a way that we would be able to figure out how much covered labor and how much material.

[fol. 1160] April 16, 1924.

Met pursuant to adjournment.

Henry M. Brundage, a witness on behalf of the plaintiff, resumed the stand.

Cross-examination (continued) by Mr. Donnelly:

Yesterday, I was asked for three things, and I have them. I have tabulation prepared showing the cost of gas supply inspections during the years 1922 and 1923, showing the particular account where the items may be found and bringing the total cost down to $196,197.15. This shows the pages of the different ledgers and folios where the accounts are to be found, both the labor and materials. It is shown separately by years.

Expenses in Connection with "Gas Supply Inspections," Years 1922 and 1923

Year	Ledger & folio No.	Name of account	Labor	Material	Total
1922.	Ledger B-Fol. 840.	Work on Cons., Prem. Adjusting & Repairing Appls., Gas Supply Inspections, Shops	$65,039 86	13,789 92	78,829 78
"	" " "	855. Work on Cons., Prem. Adjusting & Repairing Appls., Gas Supply Inspection, Comm. Dist. Dept	2,392 49	34 18	2,426 67
"	" " "	811. Work on Cons., Prem. Adjusting & Repairing Appls., Gas Supply Inspection, Com'l Offices	4,037 88	10,801 76	14,839 64
		Total Year 1922	71,470 23	24,625 86	96,096 09
1923.	Ledger B-Fol. 894.	Work on Cons., Prem. Adjusting & Repairing Appls., Gas Supply Inspection, Shops	93,773 01	876 74	94,649 75
"	" " "	891. Work on Cons., Prem. Adjusting & Repairing Appls., Gas Supply Insp.,			

Comm. Dist. Dept	3,624 99	18 00	3,642 99

" " " " 911. Work on Cons., Prem. Adjusting & Repairing Appls., Gas Supply Insp., Com'l Offices	1,300 40	507 92	1,808 32
Total Year 1923	98,698 40	1,402 66	100,101 06
Total 1922 and 1923	170,168 63	26,028 52	196,197 15

[fol. 1162] That represents the cost to the Consolidated Gas Company alone. It does not include any of the work done for subsidiary companies.

I have also prepared a tabulation of meters owned, as of June 1, 1923, showing the number on the district, the number in stock, divided between ordinary and prepayment meters, a total of 613,102. This does not include meters of any other company. If is similar information to that contained in the Annual Reports as of the beginning and end of each year. This is prepared as of the immediate date, for which request was made yesterday.

	Number on the district	Number in stock	Total No. owned
Ordinary:			
3 Lt.	161,200	7,201	168,401
5 "	233,307	12,649	245,956
10 "	31,061	1,490	32,551
20 "	11,350	438	11,788
30 "	5,578	278	5,856
45 "	3,353	110	3,463
60 "	1,842	91	1,933
80 "	9	7	16
100 "	1,249	196	1,445
150 "	433	19	452
200 "	298	20	318
250 "	45	3	48
300 "	165	19	184
500 "	2	2	4
600 " (Wet Meter)	1		1
800 " "	1		1
Total ordinary	449,894	22,523	472,417
Prepayment:			
3 Lt.	97,374	6,200	103,574
5 "	29,671	7,440	37,111
Total prepayment	127,045	13,640	140,685
Total ordinary and prepayment	576,939	36,163	613,102

[fol. 1163] Then there was a request for the number of employees in the different departments as of December 31, 1922 and December 31, 1923:

As of December 31, 1922:

General Office	455
Commercial Office	979
Meter Shops	1,020
Street Dept	334
Manufacturing and Storage Stations	616
Construction, Transportation and G. O. Building force	855
Total	4,259

As of December 31, 1923:

General Office	510
Commercial Office	959
Meter Shops	733
Street Dept	464
Manufacturing and Storage Stations	613
Transportation, Construction and G. O. Building force	873
Total	4,152

[fol. 1164] Then there was a request for the general office force, 455, in the different departments on December 31, 1922.

Commercial offices 979.

Meter Shops 1,020.

Street Department 334.

Manufacturing and Storage Stations 66,616.

The construction, Transportation and G. O. Building force 855. Total 4,259. At the end of the succeeding year, December 31, 1923, the general office force is 510. The commercial offices, 959; Meter shops 733; Street Department 464; Manufacturing and Storage Station 613; Transportation, Construction and G. O. Building Operating Force 873; Total 4,152. Those are all Consolidated Gas employees. Some of whom on occasions do work and per-

form service for companies other than the Consolidated Gas Company. The first item used of the G. O. staff of employees is the number on the monthly roll and on the general office weekly roll.

Referring to the item of the gross earnings tax, the amount we paid to the State is based upon one-half of one per cent of the gross revenues. The formal report requires us to include all of that revenue not only receipts from gas consumers, appliances, etc., but also receipts from rental of property not used in the gas business, receipts from interest on bonds and other investments and dividends on stock, etc., no matter from where derived. It included these items enumerated and we made an apportionment on our books in which we attempted to charge our expenses with the amount of these taxes applicable thereto. The gross earnings tax is based upon the gross earnings of the company, and in order to prepare the report we are obli- [fol. 1165] gated to recite specifically the sources of the revenue therein included and the taxes applicable to those various revenues are applied as an offset to the appropriate accounts.

We apportion that tax on the basis of the amount of income of each kind as the income is received and that is all shown on the return. The books show the same apportionment of our taxes as our reports to the Public Service Commission. We have apportioned the tax on dividends between the gas operations and income from sources other than operations. The basis of that apportionment is according to the sources of revenue and the books show that. Our reports to the Public Service Commission are transcripts of our books.

Our account "Taxes," as shown on our books totals $2,241,899.75 for 1923, whereas the report to the Public Service Commission shows the amount $2,334,715.69.

This schedule does not show the whole tax story, because under the Commission's rules and accounting methods we have to treat some of the taxes—non-operating taxes—as applicable to other items. It is quite a lengthy story to tie these two together, although I can give it to you if you wish.

[fol. 1166] The account entitled, Interest During Con-

struction is kept by us and shows a credit balance on December 31, 1923. The credits to that account represent the discounts that the company obtains by the prompt payment of such sundry creditors bills as represent material used in construction. We have no such item as interest on construction funds. That account represents only discounts. The Public Service Commission's classification system provides that discounts obtained by the prompt payment of bills applicable to construction shall be credited to this account. We have no procedure such as setting aside specific amounts for construction.

We have an account on our books entitled "Miscellaneous Construction Expenditures" and there was a balance in that account on December 31, 1923, though I haven't the ledger [fol.1167] before me, but undoubtedly there was a balance there. I am not prepared to say that the only year in which we charged anything against this account was the year 1923. The books would show. The classification system gives such an account and if we had anything applicable to it, we would charge it there. I cannot say from memory that as a matter of fact, there were no charges to that account prior to 1923.

I have devised systems of accounts for the Consolidated Gas and some of its affiliated companies. I am an accountant of a thirty years' experience. I am not a certified public accountant but I regard myself as entirely competent on all accounting questions within reason. Years ago, I personally made the tabulations of the Consolidated Gas Company's operating expenses from time to time, several; it is done now under my supervision by other men. It is something over which I exercise direct supervision and control, and those tabulations were made from time to time under my supervision during the period which has elapsed since January 1, 1922. I am familiar with this provision of the Uniform System of Accounts prescribed for gas corporations by the Public Service Commission. I helped to draft it. I am also familiar with the language of this provision: "G 2086. Miscellaneous Construction Expenditures. Charge to this account salaries and expenses of executive and general officers of the gas plant under construction * * * insurance during construction, also

construction and equipment items of special incidental nature which cannot be properly charged to any other account in this classification." Such provisions of that nature, as we had during 1922 and 1923 would be so infinitesimal it [fol. 1168] could not be measured. I don't mean I did not charge anything to that account for those services during those two years. I have already covered the point, but let me cover it again. There are three factors involved in what you just read me, the executive officers of the company, the construction force, and the general office expenses. The big feature there, the construction force, is capitalized under Engineering and Superintendence. The construction force do the work. Beginning with Mr. W. Cullen Morris, and all his staff, that is all capitalized as the Commission system provides. No portion of the executive officers time is capitalized because the amount of time they spent on it cannot be measured with any degree of certainty. Such an apportionment of the salaries of the executive officers has never been attempted. Mr. Addicks, our vice-president, is our engineering officer, and looks after construction matters. How much time he spends at it I am unable to answer. Most of the details, and a great volume of work that is done in the construction department comes to him to be passed upon. He does not make my report to the Accounting Department of the time consumed by him on construction work. It is not a fact that the Construction Department is one of the departments of the Consolidated Gas Company which is directly under the supervision of its general officers. It is under the direct supervision of the Chief Engineer of the company. It is not a fact that all expenditures are discussed by the executive [fol. 1169] officers. It is certainly not a fact that the executive officers first make authorizations before contracts for the construction work are even advertised. The authorization is finally passed by the Executive Committee, but before it can be passed upon, the Construction Department have done a great volume of work. They have made their preliminary investigations and then they make their recommendations and then it goes to the Executive Committee. I have no doubt that the general officers are consulted about the policy of making new additions to fixed capital. As a

matter of fact they undoubtedly devote some of their time to the consideration of the question of expending certain amounts of money on new capital additions, and they look into the contract themselves before they are approved, and consider the proposals, and whether or not the money called for by the proposed contracts shall be expended. It is undoubtedly a fact that the legal department is likewise concerned with the form of the contract and with the legal questions involved in the purchase of the property, getting the titles to property and so forth. I have already testified that no charges to construction, or no part of the salaries of the general officers, or of the legal department, are charged to construction account.

I testified yesterday I could not give you the specific amounts by way of salaries to the general officers, although the aggregate amount of those salaries is shown upon the company's books. The aggregate amount of the expenses of the general office is also shown on the books. Those items are the same as those which are reported to the Public Service Commission in these two items, Salaries and Expenses of General Officers and Salaries and Expenses of [fol. 1170] Clerks. A company could not operate that did not have their officers looking after the various operations of the company in every department. I have made no apportionment on our books of the salaried paid the officers of the company and no attempt, that I know of, has been made to find the basis for such apportionment. Some other officers might have made a study of it sometime for all I know. I never did. I thought it was hairsplitting.

We do allocate the expenses of the Street Department, the New Business Department, the Commercial Department and whatever other departments do work for the Consolidated, as well as for the affiliated gas companies on some basis, very carefully, and bill them each month. When any work is done for the other companies the direct cost of the work is billed to them at once along the lines I testified to on several departments yesterday. When we come to the Street Department, which does more work than any other department for the other companies, this direct charge is made at once, but over and above that there is an overhead of operating in the Street Department, repre-

sented by Mr. Simpson and his staff and those people, whom it would be burdensome to try to apportion each week, and on a monthly charge that over head is worked out and apportioned amongst the other companies, based on their main mileage.

The time records of all the men in the field force, all the men that are actualy doing the work for the other com- [fol. 1171] panies, distinctly show what charge is to be made to the other companies, and such charge is made week by week. Over and above that, once a month the overhead of Simpson and his staff and that class of men is rounded up in one aggregate, and based on the same mileage of the three Manhattan companies that charges is apportioned amongst those three companies. That last I have just stated relates to the overhead. A record is kept of time in hours of work done for other companies.

The promotion expense of the company in the year 1922 was prorated on the basis of the ratio of the gas sales of each company's rented appliances in the district.

In the year 1923 the same expense was apportioned on the basis of the ratio of each companies rented appliances on the district. All of the affiliated companies of the Consolidated rent appliances, and here is a string of, we will say, six companies having rented appliances out in the district, appliances rented to consumers, a given number for each one of the six, and the ratio of each one of those to the total of the rented appliances is the basis for apportioning all of the promotion expenses of the company. The promotion department includes the gas appliance and utilization departments.

There was a change in the basis of the apportionment of the new business department, in 1923, as contrasted with 1922. 1922 was divided on the basis of the gas sales of each company. I think I was instrumental in making that change. The change was made because it seemed to me that the rented appliances on the district was the better basis of apportionment sales than the gas. It seemed more equitable [fol. 1172] to us. I cannot say that the results produced by the operation of the two methods been such as to enable me to say that my judgment in that regard has been proven or confirmed. There were several factors involved in the suggestion of the making of the change. The promotion de-

partment of the company is maintained primarily to stimulate the sales of gas and the more appliances you can get on the district the bigger feeder you have for your system and the greater your company is expanded; and, in view of that, it seemed to us that the rented appliances on the district was a little more logical basis of apportionment than to have it on sales. We have had a considerable development of industrial business in this city in the last few years, and the sales of the company might be very materially augmented by a big industrial load put on their lines which would not justify the parent company in charging the promotion expense to that company on a gas sale ratio, and for the gas appliances, it seems to me a little better basis, as a reasonable economical basis for that division. The difference it makes in dollars to change from one method to another is infinitesimal as far as the financial results are concerned.

When I referred to the basis of rented appliances on the district, I am referring to the number of rented appliances on the district. We sell appliances as distinguished from rented. We do not put those on the same basis as the rented appliances. Once they are sold we are through with them and keep no record. The number of sold appliances was not one of the factors taken into account in determining and deciding upon the new basis adopted for 1923. The [fol. 1173] Commercial Department, operates for itself. It does not work for the affiliated companies. Each affiliated company has their own commercial departments. We have quite a number of items, where departments are maintained for joint benefit, and we apportion their costs.

We have an account on our books entitled, "Insurance," and included in that insurance account is fire, accident, automobile insurance and others. Speaking of the year 1923 it is a fact that the amount carried for fire, accident and automobile insurance represents amounts paid to the fire insurance fund and liability insurance fund trustees and the member of that fire insurance fund are the Consolidated Gas Company and its affiliated companies, the New York Edison Company and the other electric companies in the system, the Westchester Lighting Company and the Brooklyn Edison Company. In other words, the companies insure themselves in that way through a trustee's agreement. An

item there of $39,931.91, which is the amount of our fire insurance paid into the fire insurance fund, represents payments to this fund as administered by the trustees. The trustees of the fire insurance fund charge us rates which are appreciably lower than we could obtain through regular line insurance companies on our gas works property excepting holders. The York Fire Insurance exchange rate is 75 cents; the trustees charge 22½ cents. On the holders, the fire insurance exchange rate is 60 cents and the trustees charge us 22½ cents. All our other properties, the trustees insure at the regular New York Fire insurance exchange rates, deducting 20 per cent. The rates charged by the [fol. 1174] trustees I get from data rendered to the company. The rates of the New York Fire Insurance Exchange are matters of public record, that is this subject of insurance is the insurance covered by the fire insurance fund. That is to say, of each plant and each holder and each automobile and other pieces of property an elaborate schedule is prepared each year and submitted to the trustees as representing the property we wish to have covered by fire insurance. The rates charged on this fire insurance are not the same rates as would be charged by an outside company. They are less. We do not insure in outside companies. All our fire insurance is covered through the trustees, and that is the only way in which fire insurance is covered. No other insurance is covered by this insurance fund, insurance in outside companies. I believe the trustees re-insure in outside companies. We carry a burglary insurance, hold-up insurance, plate glass insurance, steam boiler insurance, and items of that nature we place direct with the insurance companies that carry that kind of risk, at the regular established rate. This fund is created in order that we may get the insurance at the lowest available cost. The rate would be higher of course, if we went to outside companies. I do not know what proportion of the premium of an insurance company actually represents fire losses. It is a fact that we receive back in the form of participation certificates, [fol. 1175] yearly certain amounts of the expenditures which make in fire losses. The amount so received in 1922 and 1923 is a matter of record in the books. Every certificate that has been received by the company has been made a matter of record in the books of account. I did not apply

this amount in reduction of the premiums that we paid. We did not carry that amount as a profit outside of the operations of our gas business. The Public Service Commission distinctly indicated that those certificates when received should be set up on the asset side of our balance sheet as an investment, and I complied with their instructions. In other words, we treat those as an investment; the Commission so required me to do many years ago, and we have always done it that way. The certificates represent the company's proportion of the excess received by the trustees over and above losses incurred and expenses of administration. The trustees carry those balances from year to year and they are applicable to preceding years, so as a matter of fact, they represent an interest, practically in any net balance that may remain on the closing up of business, or any net losses. They have not yet called upon us for any assessments. Under this agreement it is distinctly provided that we are liable for any deficiency in the premiums paid over losses sustained. It is a contingent asset and liability. We have not been called upon for any assessment since 1902. We carry accident insurance and automobile insurance in the same manner, except through a different agreement, known as the liability insurance trustees agreement. The same general procedure is observed. The manner of ad- [fol. 1176] ministration and so forth of the fire insurance would apply also to the liability insurance, with the single exception that the liability insurance trustees have never issued any participation certificates. The fire insurance trustees have not given us back the premiums, but they give certificates which amounts to a premium.

By the Master:

They give a certificate which may, at some future date, or on the winding up, if there was a balance, entitles them to receive a proportionate share of the balance of income. If after issuing the certificates they should sustain a loss in excess of any surplus in their hands the certificates would not only be wiped out entirely as representing any excess, but the companies would be liable to an assessment under it. We have not actually received any money, not a cent. I believe they accumulate that amount and hold it against

any possible payments they have to make. The premiums which they do issue do include all the expenses which an outside company would have to pay and they have to administer the fund. They do have agents. We get no certificates for that fund.

Now, in addition to the fire insurance, we also carry insurance for employees and public liability and that insurance we place with the Liability Insurance Trustees, Hamlin & Co., being the trustee's agents. We place it directly with the trustees.

I testified that our Sundry Debtors Blotter showed the basis of apportionment for charges to subsidiary companies. As to Sundry debtors Blotter, Plaintiff's Exhibit [fol. 1177] No. 713, and page 538, the bill to the Astoria Light, Heat & Power Company appearing at the top of the page is not a bill rendered on an apportionment basis, with the exception of the very last item. The first four, being 90 per cent of the bill, are direct charges for services rendered. The administration expenses shown in the last item is the cost of maintaining the Mutual Aid Society, who handle this work for us, and this is worked out based on the number of employees in the affiliated companies whose people are members of the Mutual Aid Society. The book shows 90 per cent right there in those four items. That has nothing to do with the apportionment. The only item that is apportioned is that item of administration expenses.

Referring to the 15 per cent opposite the words on the bill under "Services of Doctors Copeland and Hawthorne," our share 15.75 per cent, the bill does not give the apportionment of that particular item, and just for the record I will now testify that that is based on the membership of the various companies' employees in the Mutual Aid Society.

Speaking of our Accounting Department, I have already described in a general way the duties of the Accounting Department with reference to the keeping of the books of the Consolidated Gas Company. They keep an account of how much is due the company, and the Accounting Department [fol. 1178] also does the billing on those transactions.

The Accounting Department does not render any service to other companies, and their expenses are not apportioned to the subsidiaries. The services enumerated they render

to the Consolidated Gas Company. I do not consider the rendering of bills to the subsidiaries and keeping of accounts of monies due from sub-companies, to be a service for the subsidiaries.

An inspection of the Sundry Debtors Blotters for the various years will give the number of bills sent out a month by our Accounting Department to your subsidiary companies and others for whom we do work or perform some [fol. 1179] sort of service. The rendering of bills is a regular routine of every company, and it is done for the benefit of the company that renders the bill, that they may collect their funds. It takes up some time and the billing is the smallest end of the transaction. If each one of the Manhattan gas companies had their own street department, and did their own work, we would be continually opening excavations and be obliged to do work for the other companies, and we would bill them just as we do now, only not so much. That is the big item of billing; the billing to the other companies for work done in connection with Street Department operations. As to the material reaching our storehouse, that goes out on construction jobs or repair jobs for the affiliated gas companies, the various departments of [fol. 1180] the Consolidated audit the material. All the work being done for construction or repair work of the other companies, the material comes into one of the three Street Department yards and it is charged to Pipe and Specials, a capital material and supply account, and the cost of handling that material is charged, as your examiners undoubtedly found, in our Suspense Account, Pipe and Special Handling, representing all the costs imposed upon the parent company in handling that stock from the time it comes in until the time it goes out, and when it goes out the company bills the other company who got the service and got that material, and includes its proportionate share of that overhead cost of handling the material. We do not in billing include any of the overhead expenses of the parent company in the Accounting Department, because it is too infinitesimal to measure. I make that as a statement of [fol. 1181] fact. It is not a question of judgment; it is a statement of fact as to the yards. It might be a question of judgment as to whether we could apportion some in-

finitesimal part of one clerk's time in the Accounting Department, putting this data together over on the bill. We have one Sundry Debtors clerk that does this work of billing exclusively and he has a young woman that runs the machine that grinds out the bills.

Going back to the storehouse, when this job is done for which we have billed the company, the requisition is made on our storehouse and the storehouse records the requisition and somebody picks out the material and one of our trucks delivers it on the job. Also on our storehouse record it is recorded as issued to the job and for the particular party for whom the work is done. When this job is completed the next step is to charge the company for the work. We have time tickets showing the men's time employed on the job, which are figures up by the Payroll Department, based on the District Foreman's report of work performed, and these time tickets are collected, figured up and the total recorded as a charge against the company. The checking of the bill done by the company who receives the goods. The rendering of the bill is up to the Consolidated, which we do, and all the steps that I have described there at some great length are all billed to the company who gets the work done. The [fol. 1182] overhead of the Street Department includes all that very class of labor, the handling of pipe and specials, the clerks who look after the work. That is all billed to the other companies. The only thing which we do not bill, which I now concede and have conceded before, is any portion of the Accounting Department clerks who do the work. You will find bills rendered every month from the Sundry Debtors Blotter for the overhead of the Street Department.

Referring to the plus five per cent to the labor and materials charge, it does not cover those various details that I enumerated. I explained to you why it did not, and I explained to you why we charge outside companies, outside of our family, fifteen per cent, whereas our own company we only charge five per cent, because the overhead of the Street Department is billed every month to our affiliated gas companies, apportioned on the basis of main mileage. I did not say who determined why five per cent to subsidiary companies. I said that had been in force a great

many years, and I do not know who really started that originally.

I testified for the plaintiff company on the trial of its suit to set aside the old 80 cent gas law before Mr. Gilbert.

We have an account in our books Miscellaneous General Expenses and in that is included all the items which under the Uniform Classification of Accounts are chargeable thereto. One of the items included in that account is Directors' Fees and different books show specifically the amount charged as directors' fees for 1922 and 1923. We call it in our accounts directors' fees, but as a matter of fact the [fol. 1183] by-laws of our company require that the governing body shall be known as a Board of Trustee rather than directors. It refers to the meeting held by that Board of Trustees or committees of the Board. There might be some consideration given at the Executive Committee meetings to the purchases of supplies for joint benefit of the Consolidated Gas Company and its affiliated companies. Such things are not discussed at the Board meetings. At the Board meetings themselves, matters of policy in the government of the affairs of the affiliated companies which are controlled by the Consolidated might be discussed. No apportionment is made of the directors fees between the Consolidated Gas Company and its other companies.

There are no automo*n*iles attached to the general office building on 15th Street, to bring our general officers to and from work. In our transportation department we have a number of passenger vehicles which perform any service that they may be called upon to. If an officer of the company wanted a car to attend to the general business of the company, he would send for it and it would be sent to him. The Consolidated Gas Company has in its Transportation Department a number — vehicles, and if any officer of the company needs a car in order to perform some function of the company, he advises the dispatcher of the garage and a car will be sent to him. The chauffeur driving these cars are all Consolidated men and are carried on the Consolidated Gas Company's payroll. I have doubt [fol. 1184] I have a list in the Accounting Department of the automobiles owned by the Consolidated Gas Co., on January 1, 1922, and December 31, 1923. I have not seen it for some time, but we do keep such a record. The books

do not show the number of automobiles. It would be a statistical record. I can have a list of the cars prepared very quickly.

There is no attempt on the part of the Accounting Department to keep track of the cost of operating the individual cars. We have found from years of experience in this kind of accounting that the ideal way of keeping track of the cost of operating the cars is to keep the cost of our cars by classes; that is to say, we divide the total number of automobiles which we have into seven classes. There are the passenger vehicles and then there are the small trucks electric, and the large trucks electric, the small trucks gas, and the large trucks gas, and the emergency cars—that is, the street emergency cars that you see going to accidents—and the overhead department, represented by the superintendent and his men. The account is so maintained in the ledgers which are already in evidence. So we keep in the account called Automobile Suspense the cost of operating our transportation department, divided under these heads I have just given you. That reference to gas and electric means their motive power. We use four kinds of trucks, divided into four classes; small trucks driven by electric power, large trucks driven by electric power; small trucks driven by gas power and large trucks driven by gas power.

The Accounting Department keeps track of the moneys expended in repairs to cars and the gasolene used in run [fol. 1185] ning the cars. All the cost of operating this whole transportation department is charged to the account called Automobile Suspense, and at the end of every month we get a record from the garage as to the service rendered by each of these classes and the service rendered is stated in a certain number of hours. That number of hours multiplied by a rate that we have established from experience over a long period of years, results in a credit to this Automobile Suspense account and a charge to the various operating and construction accounts for which the work was performed. In other words, a record is kept in the transportation department of the use or uses to which each of these classes of cars is devoted and the accounts are charged on the basis of the information conveyed in that way.

We had a contingency reserve at the end of 1923. The name of the account is I think Contingency Account in the ledgers. It is a reserve account on the liability side of the balance sheet, entitled Reserve for Contingencies. That account was created years ago. It has not moved in four or five or six years. The account is a segregation here of our surplus set up in this reserve account for any contingency that may arise. It is not built up by taking anything out of the revenues derived from the sales of gas. It represents appropriations of surplus. We carry it as reserve account. The directors of the company determined to segregate that much of the surplus and carry it there. They passed a resolution to that effect and I have obeyed their instructions. The resolution did not give the purpose of the account itself. That is the title of the account and describes what it is for. It is a reserve for contingencies unforeseen.

[fol. 1186] During 1923 no part of the reserve for contingencies account was used by the Company.

The amount of withdrawals from fixed capital last year included the land at 14th Street and the 42nd Street stations, and the plant at 14th Street station. I do not recall any plant withdrawn at the 63rd Street Station. Unamortized investment in the 42nd Street plant was transferred from the 42nd Street plant to an account, unamortized investment in the 42nd Street plant. We did withdraw the aggregate of these items from our fixed capital account on our books in 1923. Unamortized investment in the 42nd Street plant is the amount of the company's investment in the 42nd Street station that has not yet [fol. 1187] been charged against the Retirement reserve, formerly known as renewals and replacement reserve. That amount has been transferred from the account in which it was formerly carried, West 42nd Street plant to unamortized investment West 42nd Street plant, but it has not yet been withdrawn from our fixed capital, but will be in due course. It is out of plant account.

Since January 1, 1923, we had a balance in our renewals and replacement reserve. During 1923, we added to our reserve the amount represened by the three and one half cents per thousand feet of gas sold during the year. We have not a debit balance in this reserve at the present time,

but did have a debit balance as of December 31, 1923. It is now a credit balance.

Part of the stable and automobile expenses was charged to construction during 1922 and 1923. The underlying data for charges to construction I have already covered, and the same holds true of the underlying data relating to operating. The amount of the automobile charges to construction is based upon the reports as to the number of hours of service rendered by the different classes of cars, and the same thing holds true of operating expenses. To the extent that our automobiles are used by the Street Department, it may be said that part of them render service to the affiliated companies and the Manhattan companies. [fol. 1188] In those instances, they are based on a monthly charge that the Consolidated Gas Company renders to the other companies for the use of automobiles and overhead expenses. The basis of that charge is main mileage. I determined that as the basis upon which to make the apportionment fifteen or twenty years ago. That has been the procedure for a long while. The overhead in the Street Department, including the automobiles is worked out on a main mileage basis and that includes the automobile charges, whether used in the transportation of materials or whether the charges have been incurred for repairs to the machines.

On Block 953, Lot 1, which is between 21st and 22nd Streets, and Avenue A and First Avenue, is located the central garage of the Consolidated Gas Company. A portion of the real estate taxes and insurance and repairs to that building and care and maintenance of that building is apportioned among the Consolidated Gas Company and its affiliated gas companies. It is worked out on a main mileage basis. We apply the main mileage basis in the apportionment of the taxes for all work done by the Street Department for the Consolidated Gas Company for the benefit of the affiliated and Manhattan companies, that is worked out on the basis of main mileage.

On the south side of 21st Street there is a steel garage building. All of the property adjacent to 21st Street station, no matter on what side of the street it is, are all included in the automobile expense, and that portion ap- [fol. 1189] plicable to the Street Department is charged to

the companies; that includes all the buildings occupied by the garage. I am referring now to Central Garage at the East 21st Street station.

As to Block 1704, Lot 5, which is between 110th and 111th Streets, and between Pleasant and First Avenues, I do not recollect the specific property being used as garage and stable. There is a street department located there and there is the emergency wagon that is kept there, and they are spread out among the other companies, and the superintendent's wagon is kept there and maybe some others, I am not familiar with that particular property.

I know the three story brick stable at 20th Street which is used for the horses employed by the National Coal & Coke Company. The Consolidated Gas Company rents that stable to the Coke Company, for which they collect a rental which they put in the operating revenue, and any taxes that are paid on it would be charged in operating taxes of the Consolidated Gas Company.

I know the yard between 17th and 18th Streets and Avenue A and B, that is used for the storage of large cast iron pipe and fittings. It is known as the Hester Street Pipe Yard, because there is where the Hester Street Department maintains their largest store of pipe and specials. My recollection is that the taxes on that property are charged [fol. 1190] to the Consolidated Gas Company as operating taxes. No apportionment of the taxes on that property among the Consolidated Gas Company and its affiliated gas companies; yet that yard is used to some extent for the storage of large cast iron pipes and fittings, drawn upon the laying of mains and services and the repairs of mains and services for the affiliated gas companies. The easterly building on Avenue B, which is used for the storage of large castings is part of that same yard. It is my recollection the taxes on that building are carried by the Consolidated Gas Company alone. No apportionment of those taxes is made among the Consolidated Company and its affiliated gas companies.

On Block No. 1177, Lot 21, between 65th and 66th Streets, and between West End Avenue and the North River there is a two-story and basement brick building which contains the office of the superintendent of the Department of Mains and Services, also storage space for lead, wool and jointing

material, stock of wrought iron and malleable fittings, and a one-story brick building used as the headquarters of the emergency wagon service, a large stock of pipe and fittings, valves, etc., and the large area used for the storage of stock used in the main street work. That is the West 66th Street Department Yard. I believe the taxes upon that property are carried wholly by the Consolidated Gas Company and I believe no part of the taxes there are apportioned to the subsidiary gas companies.

[fol. 1191] On Block 1683, Lot 18, between First and Second Avenues, and 111th and 112th Streets, there is the 111th Street headquarters of the Department of Mains and Services. I believe the taxes upon that property carried entirely by the Consolidated Gas Company. I think no apportionment is made there of any part of the taxes to the affiliated gas companies.

The property on Block 1712, Lot 2, which is a bulkhead between 110th and 111th Streets, and on the East River, where the Consolidated Gas Company receives the shipments of cast iron pipe and fittings, is rented to the Astoria Company for the receipt of coke. The Consolidated Gas Company might receive a shipment there once or twice a year just as a matter of convenience, but it is not used for storage or for any such purpose; that property is rented to the Astoria Company and is used continuously for the receipt of coke. The taxes upon that property are charged against the rental revenue. We rent all of that property to the Astoria Company and they pay us a stipulated rental for it. The National Coal & Coke Company draw from that stock, that is sent there by the Astoria Company. There is no reason why any apportionment of the taxes upon that property should be made to the National Coal & Coke Company because the Coke Company does not occupy any part of it. The Coke Company does not use it. It comes there and draws coke as it needs it or as it sells it. It goes there and gets it out of that yard, and we recover our return by charging the Astoria Company for the use [fol. 1192] of that yard and the use of the bulkhead likewise. We do not apportion the taxes on the bulkhead to the Astoria property. We put that rental revenue that we get from the Astoria into our rent revenue and correspondingly

put the cost of the upkeep into our operating expenses. We rent it to the Astoria.

On the northwest corner of 111th Street there is a pipe yard which belongs to the 111th Street Department, and that is where they store their pipe and specials. That has nothing to do with the school of instruction and they have this electrically operated derrick there for handling the materials. No part of the taxes upon that property is assigned to the subsidiary gas companies.

Referring to Block 1704, which is between 110th and 111th Streets, and between Pleasant and First Avenue, that Mr. Ahrich testified that the middle portion of that block is used for the storage of lumber, I do not know anything about that. I am not familiar with that particular property and I do not know anything about the lumber being there, or [fol. 1193] what use is made of it there.

The taxes on the Hester Street portion of the Street Department property is not apportioned among the other companies. I am referring to that part of the Hester Street buildings occupied by the Street Department. There is a small yard at 82 Elizabeth Street, and that stock is drawn on by the Department of Mains and Services. There is no part of the taxes upon that property assigned to any of the affiliated gas companies. The Consolidated Gas Company carried all of the real estate taxes in 1922, applicable to the East 14th Street property.

There was a charge made by the Consolidated Gas Company to the New York Edison Company for the use of a part of the property at Astoria, during 1922 and 1923. That charge is evidenced by a detail record which you will find in the Sundry Debtors Ledger and Blotter charging the Edison Company for the use of that portion of the Astoria land which was used by them for storage. I am speaking now of the Astoria Sundry Debtors. The charge was the result of many conferences and an agreement between the officers of the two companies, in which I took no part. The information came to the Accounting Department as to how to charge the New York Edison Company from the Vice President of the company, Mr. Carter, now deceased. My recollection is a written agreement was entered into covering the basis on which that charge was to be made. The information that came to me was in the form of a written

paper, which gave me my information as to how to make the charge.

The account Gas Transferred in the ledger would show if the Consolidated Gas Company purchased gas from the [fol. 1194] Astoria, New Amsterdam and Standard Gas Light Companies in 1922. On the bills rendered by those companies to the Consolidated Gas Company, are the details in regard to what is included in the gas that is purchased from those different companies. That is, when we buy gas from one of these companies, the basis of the charge is embodied in a bill rendered to the Consolidated by whatever company it is that we buy the gas from. The subject of the charge is one of agreement between the companies. The price is the cost of production to the producing company; the use of the facilities which produce the gas is a matter that we know as the Joint Facilities Report and that Joint Facilities Report was made up by George E. Woods, Chief Engineer. The Joint Facilities Report I referred to, the Woods report, deals with the basis upon which the companies are to pay for the use of facilities used by more than one company.

By the Master:

Gas is transferred from one company to another at production cost to the producing company, as shown by examination of the cost records of the company that produced the gas. Our books show only what we pay for it. They show the details as to how that cost is made up. In order to get at the cost of the gas purchased by the Consolidated Gas Company from the Astoria, for instance, either I do or some of my assistant secretaries go to the books of the Astoria Company to see the production cost. The Joint Facilities Report sets up a rate of return on investment in land and a rate of return on investment in plant and a rate of return on investment in a distributing system: That is the same percentage as to each of the companies. There is no variation there in percentages.

[fol. 1195] April 17, 1924.

Met pursuant to adjournment.

HENRY M. BRUNDAGE, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination (continued) by Mr. Donnelly:

Referring to Repair Authorization No. 163, I charge it to the cost of operating the General Office Building, and the very fact that it is so charged in the account indicates that that was my judgment. That holds true of the entire amount of that job. The whole thing was an alteration job to the interior of the general office building. The fact that it was an alteration job was the inducing cause of charging the entire job as an operating expense. No fact was charged to fixed capital. I do not know of my own knowledge whether or not the job has actually been completed, but the fact that the work was authorized in November of 1922 leads me to believe without any question that the thing [fol. 1196] has been all done. I would say that the whole alteration and repair authorization was a straight rearrangement of the interior of a building; did not add anything to the assets and should therefore be charged to operating expenses.

Referring to the Authorization No. 205 for painting at 80 Elizabeth Street, the authorization was approved on April 10, 1923, and estimated to cost $2,300. The amount expended up to December 31, 1923 was found to be $2,045. I do not know whether or not the job has yet been completed. I have not the details of the cost before me. I cannot tell from anything I have here, when 80 Elizabeth Street was painted last prior to this job No. 205.

Referring to Repair Authorization No. 228 for repairs to roofs, etc., and repainting building at 2084 Third Avenue under date of August 14, 1923, I have before me a copy of the Executive Committee's authorization. We keep a record of the amount of charges against each authorization and if the amount expended on the work calls for a greater expenditure than that which is estimated for the particular job, we would go back to the Executive Committee and ask [fol. 1197] for further authorization, which would have to be supported by evidence that it was needed.

On Authorization No. 228, I find no reference to an item of $950.30 to the International Metal Works. I have a copy of the original authorization which approved the placing of an order with the International Metal Works to do certain work in replacing roofs of these buildings, they being the lowest bid, for $1,118.

By the Master:

These authorizations referred to, under them there have been a variety of individual vouchers and charges for work and services rendered or material furnished on those various authorizations. In the course of my work there I did not examine these various vouchers that came in for services and material, but I indicated at the beginning of the project the account to which all charges under that authorization were to be made, and I can testify this morning in respect of each authorization as to what account it was charged to. The authorization or the estimates under authorization indicate the detail, the character of the work to be performed, and after examining them, I made that direction. The estimates show in detail how the bid was computed. In this particular item, these people made the lowest bid to do certain work, to replace the roofs of office buildings at 2084 Third Avenue and 175 East 114th Street, for a definite number of dollars. That was approved by our Executive Committee. I have the low bid for that particular branch of the work which is $1,118 as approved by our Executive Committee; that was for the work which I have just described. That item was charged to Repairs Buildings. In other words, as an operating expense, and not charged to any other account.

[fol. 1198] Repair Authorization No. 148 is for replacing tar separators at the 11th Street Station under date of October 3, 1922, and February 27, 1923; among the items relating to that particular job one is for $916.40 to cover the furnishing, delivering and installing one steel cover for tar separating tank. That wasn't a new installation; I believe that it was for a replacement. I charged that to Repairs Works and Station Structures. The cost of that original item still appears upon my books. I have no doubt that it still remains in our capital account and has not been withdrawn from Fixed Capital Account because it stands

there as original cost, and what he did here was to take out an old cover and put back another one in its place, and the cost of doing that work was charged to Operating Expenses Repairs. It does not change the Fixed Capital Account any. There is no reason why we should credit Fixed Capital Account. I could not say, without looking at the record of the original cost, whether or not the cost of the new unit exceed- the original cost of the item replaced. It would not change the accounting features. If we withdraw a unit of property and replace it with something else, in that event we will withdraw from our fixed capital account the original cost and capitalize the new; but when we just replace a part of a unit, a cover over a box, we would not disturb our fixed capital account in the least, but we would charge the cost of doing the work to our operating expenses.

By the Master:

And the same would apply to the replacement of a piece of machinery, or any small part.

Referring to Authorization No. 218, under date of July 3, 1923, for Repairs to Foundations of a 500,000 gallon oil [fol. 1199] tank, under date of July 3, 1923, the Executive Committee authorized us to place a contract with Richard Deeves & Son, the lowest of three bidders, for repairs to the foundations of a 500,000 gallon oil tank at the 11th Street Station, including repairs to supporting timbers, brick walls and the raising of the moat well, and that in connection with that authorization I directed that the work be charged to Repairs to Works and Station Structures. It was not a replacement; it was a repair. All repairs, to some extent, involve minor replacements.

All of the charges appearing in our account Repairs Mains represent repairs to our own mains only. I have no knowledge of any instance of repairs to mains to which are attached the services of other companies. The work tickets comprise a part of the underlying data of repairs to mains. The- come under my observation. The work tickets for work performed in connection with repairs of mains do not indicate what services are connected to them. I do not know whether or not the Consolidated Gas Company has a record of any mains to which are attached the services of

other gas companies. The Street Department could answer that. When the Consolidated lays mains for its affiliated gas companies, those companies are not charged interest on the expenditures from the time such expenditures are incurred until the work of laying the mains has been completed and paid for; a bill is rendered each month, during the progress of the work, and paid at once after the work is done. It is paid immediately upon the rendering of the bill. The repairs to tools are charged to our Account [fol. 1200] Repairs, Tools and Implements, and that is apportioned among the Manhattan Companies for whom the Consolidated Gas Company does work each month, on the main mileage basis.

Referring to the sundry debtors' blotter No. 62 for December 1923, plaintiff's Exhibit #715, at page 579, there appear some bills for sales of appliances to subsidiaries from the Meter and Appliance Repair Shop. It appears in respect of one bill to the Bronx Gas and Electric Company that no percentage has been added. I cannot tell you why the 10 per cent was not added to that company's bill. The 10 per cent that is added to the bills of the other companies covers the storage of appliances while located at the Meter Appliance Repair Shop at which point we pay rental. That has gone on for many years; at least a dozen. I could not say who started that rate originally. The Consolidated Gas Company in treating its subsidiary companies endeavors—it is my constant 24 hour a day effort—to charge the affiliated gas companies not less and not more than the cost to us for doing anything that we do for their account. That is the company's policy indicated by our executives, and I must see to it as near as is humanly possible that the companies are not over billed, but that on the other hand the parent company recovers its actual costs.

The Consolidated Gas Company has in its employ Robert E. Livingston. I cannot tell his salary from memory. He is the editor of our house organ, what is known as Gas Logic. Gas Logic is a house organ gotten out by the Consolidated Gas Company and its affiliated gas companies, which comes out monthly; a magazine reciting features of interest to the consuming public and some advertising matter. They are placed on the application desk of every commercial office of all the companies and are distributed gratis

[fol. 1201] to all who come into the office. I have not any idea what its yearly circulation is. The expense of printing, publishing and circulating Gas Logic is charged as an operating expense. I do not know of anything else that he does, except that once a year I get in contact with him and have our annual meeting published through his office. All of those services that are charged to the editing of Gas Logic are prorated among the affiliated companies. My recollection is that part of his salary is charged to the Edison Company. I would like to confirm that before I make that specific statement, but that is my recollection. The basis upon which an allocation of his salary is made seems to me is half and half. That I am not positively sure about; I will look it up. I do not know of any such title, publicity agent, in respect of Mr. Livingston. If he does work that is covered by that designation. I do not know of it. There is a voucher that comes through from his office, I think monthly; and whatever it is, it is a matter of record in these accounts, and charged—which can be turned up. I believe those vouchers detail his services. He does not occupy any part of the general office building on 15th Street; his office is No. 1 Madison Avenue, the Metropolitan Insurance Building. The Consolidated Gas Company pays the rent of that office. I could not say from memory whether any part of the rent of that office occupied by Mr. Livingston at No. 1 Madison Avenue pro-rated to the Edison Company.

I know Patterson, Teele & Dennis, the accountants. They were engaged to audit our accounts for the year 1922, and performed that service; then they were engaged to prepare schedules for the purpose of this present case. The services which they have so rendered are apportioned among [fol. 1202] the Consolidated Company and its affiliated gas companies on the basis of the gross earnings of those companies. I have not made any attempt to make an apportionment of those services on the basis of the actual services rendered by Mr. Teele's firm. It cannot be done; I mean that it would be a practical impossibility for a firm of accountants to render a bill which gives in detail the services performed for each of the companies.

The Consolidated Gas Company charges its subsidiaries including its electric light companies, with the cost of dis-

playing the electric sign on top of the general office building at 15th Street. I am not quite sure whether the sundry debtors blotter shows the basis on which that apportionment is made. I think the cost of maintaining the electric advertising sign on the roof of the Consolidated Gas Company's building, the cost is spread over the New Amsterdam, Standard, New York Edison, United Electric Light & Power, and for eight months of 1922 to the Mutual Gas Light Company, on the ratio of the gross earnings of each of these companies to the total. All the item of operating the building is apportioned between operating and non-operating revenue, on the basis of the square feet of occupancy.

The basis of the apportionment of the school of instruction at the meter shop is based on the meters on the district, that is to say, the actual number of meters on the district.

By the Master:

The cost of changing the appliances due to the change in standard was a change of all the appliances on the district; we changed every appliance on the district; that applies to the appliances on the district which had been sold to consumers.

By Mr. Donnelly:

Every appliance we found on the district we adjusted to [fol. 1203] meet the new standard. No charge was made to the consumers for those which had been sold. The Consolidated Gas Company incurred the expense of changing those sold appliances on the district to its own consumers. When the standard of gas was changed, the gas companies of New York City felt it an obligation, and they were obliged to do it, to adjust every appliance consuming gas on the district, whether it was rented or bought, or a gift appliance, no matter what it was. It was changed. The expense of each one of the companies covers taking care of their own consumers.

Referring to page 732 and subsequent pages of the sundry debtors blotter, I know that an arrangement was made by our executive under which the Berry process of gas production was to be tested, and expenses were incurred in

making that test, and the Consolidated Gas Company acted as clearing house and grouped all the expenses in a suspense account and at the end of the year pro-rated it amongst the gas companies, based, as I recall it, on either cubic feet made or cubic feet sold.

HENRY M. BRUNDAGE resumed.

Direct examination by Mr. Goetz:

I have produced from the files of my company, as kept in the Accounting Department under my supervision, the reports of manufacture of the 11th Street, 21st Street and 99th Street stations of the Consolidated Gas Company for the years 1922 and 1923.

(Documents marked plaintiff's exhibits Nos. 759, to 759c, 760 to 760k, 761 to 761k, 762 to 762k 763 to 763k, and 764 to 764k.)

[fol. 1204] I have produced from my files the original report covering the use of Joint Facilities by the Consolidated Gas Company and the affiliated gas company to which I referred on my cross examination and which I testified was the basis of the inter-company charges for joint use of facilities. The document is endorsed "Proposed Division among the System Gas Companies of the Cost of Carrying Certain Properties for the Calendar Year 1922," and is signed by George E. Woods, our Chief Engineer. This is the duplicate, original and I so identify it.

(Marked Plaintiff's Exhibit No. 765 for identification.)

A copy of this report and of Exhibit 766 have been filed with the Public Service Commission. I have also produced from my files the original duplicate report signed by Mr. Woods covering the basis of the charges for joint use of facilities for the year 1923. This report is endorsed "System Gas Companies, Investment in and Carrying Charges on Jointly Used Properties for the year 1923. This is one of the records kept by me and is made the basis of entries in the books of account as to charges for jointly used properties.

(Marked Plaintiff's Exhibit No. 766 for identification.)

Copies of both these reports were called for and given to representatives of the Attorney General, in connection with their examination of the books and records of the Consolidated Gas Company.

By the Master:

The reports of both-years were filed with the Commission.

[fol. 1205] I am familiar with the first General Ledger of the Astoria Light, Heat & Power Company, which is one of the first records I worked on in the spring of 1903. This is a book of the company, which is now in my custody as head of the accounting department of the Astoria Light, Heat & Power Company. I am an officer of the Astoria Light, Heat & Power Company. That was one of the books of the company regularly kept by it in due course of business. It contains entries showing the capital accounts of the Astoria Light, Heat & Power Company from the period from January 1899 to the spring of 1903. The company was not operating during the period covered by that ledger. There are some of my entries in that book. I worked on it at the time I came into the general office in the spring of 1903. Those books were kept according to the generally accepted gas practice at that time.

(The witness then identified and described the general books of the Astoria Company, including general ledgers, journals and subsidiary ledgers, which books were marked Plaintiff's Exhibits Nos. 767 to 785, inclusive.)

[fol. 1206] When I was Chief Clerk of the Accounting Department that one of the books that contained the accounts of the company for the period purported to be covered by the books. I had nothing to do with the entries in the book, but this volume was turned over to me when I became the head. Mr. Robert A. Carter, formerly Secretary of the company, now deceased, turned it over to me. He had been secretary for a great many years. I could not say just how long. I can testify definitely, however, that he was with the company at the consolidation and was always very active in all its accounting affairs, going back prior to 1884. He was my predecessor as secretary. I have had occasion to

refer to this book since I came with the company in the early part of 1900. This book has been used by me in connection with the identification of items of the capital accounts of the company and items withdrawn, and has been used as the basis for subsequent entries in the later capital accounts of the company. It was one of the books and records of the company, among other general books kept in the office and turned over to me by my predecessor as secretary.

(Marked Plaintiff's Exhibit No. 786.)

No. 2, Ledger, Subsidiary Accounts, Consolidated Gas Company, is the general ledger of the company, being a continuation of the information shown in Ledger No. 1 and covers the period from January, 1891, to December 31, 1898. This is produced from the accounting records of the company and was that one of the books turned over to me by my predecessor, Mr. Carter. That particular ledger was kept by Mr. Carter personally. That has been used in the same way that Ledger No. 1, that is we used that as the basis for our subsequent entries in our capital accounts where we made withdrawals and where we had to identify [fol. 1207] properties or entries in the earlier capital accounts of the company. I have been familiar with this book and used it since I became connected with the Accounting Department, I believe, in 1903.

(Marked Plaintiff's Exhibit No. 787.)

For Ledger No. 3, Special Accounts, Consolidated Gas Company, except for the period of time covered by the books, my answers to the same questions as were asked of me with regards to Ledger No. 2 would be the same. This contains the records from January 1, 1899 to December 31, 1905, and entries by myself for the last two years. That is one of the books that I kept after I became identified with the Accounting Department of the Consolidated Gas Company.

(Marked Plaintiff's Exhibit No. 788.)

General Ledger No. 4, Consolidated Gas Company, the answer that I have made in regard to Ledger No. 3 would

cover this book except for the period covering the time from January 1, 1906, to December 31, 1908; 1908 or 1912 brought down to December 31, 1912.

(Marked Plaintiff's Exhibit No. 789.)

Referring to Plaintiff's Exhibit No. 754, which is General Ledger No. 5 of Consolidated Gas Company, the entries in that book covers the period beginning January, 1913, and continuing to December 31, 1919. It was kept under my personal supervision.

(The witness then identified and described the general ledger journals covering the period from November, 1884, to December, 1922, marked plaintiff's exhibit 790 to 802.)

[fol. 1208] I have produced from my records a number of books of account which underlie these general ledgers and journals. I have two truck loads of them in court or the corridor of the court. I have produced all of the subsidiary ledgers, general account books and operating ledgers and operating journals containing the fixed capital accounts, covering the whole history of the company's transactions from 1884 down to date, in respect to its fixed capital. I did not count how many books I brought down here, but I would say they run to about a hundred. These are books underlying the general ledgers and journals relating to the fixed capital account of the company from 1884 down to the present time. Outside of the books that I have brought down here, there are other data records and so on that are kept in the files of our company. All of them are under my charge showing thousands of details. The books I have brought down which have not yet been marked in evidence and the other records and details, are available so they may be examined by the defendants. The defendants have been given access to any such records which they have called for. They are summaries, or summarize all of the data underlying the books referred to, that is, the underlying books and these records that I have referred to give in detail what is set forth in summary form in the general ledgers and the general journals. I should say, that the representatives of the Attorney-General had access to those books and likewise to the books which underlie

them and have not gone back of 1922 in this particular case. In the prior case they did go back exhaustively through our accounts for many years.

[fol. 1209] April 21st, 1924.

Met pursuant to adjournment.

HENRY M. BRUNDAGE, a witness in behalf of the plaintiff, resumed the stand.

Cross-examination by Mr. Donnelly:

I am not now the Comptroller of the Consolidated Gas Company but testified I was at one time, many years ago. My duties as Comptroller ceased somewhere about the year 1910. Frank J. Bischoff is now the Comptroller. He has direct supervision over the Accounting Department of the Consolidated Gas Company and his duties are confined to that alone. He acts in conjunction with me in supervising the work of the Accounting Department. Mr. Carter, the company's former Vice President and Secretary died on February 4th, 1924. He was Secretary before he was Vice President. My recollection is that he was made Secretary somewhere about 1905 and some years later he was made the Vice President. I cannot tell you the exact date. I was made Secretary of the Company in 1920, so that Mr. Carter was not Secretary during any years now in litigation. While Mr. Carter was Secretary of the company his time was devoted to questions of financing and management of the company. The executive officers exercise supervision over all the departments. Mr. Carter was one of our executive officers and therefore responsible for the conduct of the company's operations, and in that way he took some part in the supervision of the various departments of the company. The members of the Finance Committee of the Consolidated Gas Company are Mr. John A. Garver, Mr. Moses Taylor, Mr. George B. Cortelyou, Mr. Lewis B. Gawtry. The members of the Finance Committee study the financial requirements of the Consolidated Company including its affiliated companies, both gas and electric. During [fol. 1210] his lifetime Mr. Carter did not have charge of

our Stock Transfer Department. The by-laws of the company distinctly recite that the Transfer Department shall be under the jurisdiction of the Secretary, who is responsible for it. I had charge of the Stock Transfer Department subsequent to January 1st, 1922. It is a department of the company. The Stock Transfer Department consists of the transfer clerk and his assistants. I am responsible for that department. The function of the Stock Transfer Department is to record the transfer of the company's capital stock. It does not bring me into contact with the performance of duties for the affiliated companies of the Consolidated Gas Company. The distribution department is rather a vague phrase. I did distinctly mention the fitting shop and the street department, which together take care of the company's distribution matters. We have not a distribution department. Frank H. Rickerson, Assistant Secretary, is the head of our Statistical Department. He has about six assistants under him. Some occupy offices in the general Office Building at 15th Street.

The duties of the Statistical Department are to compile all the statistics of the Consolidated Gas Company which are required by its executive officers to manage the company. Some data does flow to the Consolidated Company having to do with the operations of the affiliated gas and electric companies. That information that is gathered by the Statistical Department is for the monthly information of the officers of the Consolidated Gas Company. The book or the record in which those statistics are kept does not form one of the books kept by the Accounting Department. No apportionment of the salaries paid to the gentle- [fol. 1211] men in the Statistical Department, is made between the Consolidated Gas Company and its affiliated companies. Our drafting is a subdivision of the construction department. W. L. MacIntosh is the head of the drafting department. As to how many he has under him, that varies according to the amount of work to be performed. As to the number of employees whose duties are confined to the drafting department exclusively varies very extensively. When sufficient construction work is to be performed to warrant it, then in that event the drafting department would add to their force. As occasion requires, the drafting de-

partment is not confined exclusively to construction work. The work done by the Drafting Department is not confined exclusively to construction work. There might be some extensive repair jobs which would be handled through the construction department and the drafting department would doubtless be obliged to take a hand in it. The drafting department likewise performs services for the affiliated gas companies. This statistical record that is kept for the information of the officers of the Consolidated Gas Company gives the manufacturing cost monthly at the company's manufacturing stations. It includes Astoria, and the information as to the cost of distribution. It gives monthly the actual cost of construction work done by the Consolidated Gas Company for itself and for its subsidiary companies. No book or record kept of the Consolidated Gas Company to which you could readily refer for the purpose of ascertaining how much money had been expended for construction work by the Consolidated Gas Company for its affiliated gas companies. The accounts of the affiliated gas companies as reflected in the report made by the particular affiliated companies on file with the Statistical [fol. 1212] Department, cover all of the construction work performed by the company during a month. Part of it may have been done by the Consolidated Gas Company and part may have been done directly. No record is kept by the Finance Committee of the cost monthly of construction work or for any other period. Among the reports which I enumerated, the other day, which came to me and which I testified constitute the basis for entries in the books of accounts are reports of condemned meters; referring to meters no longer fit to use. These reports come to me from the repair shop. Every month the shop superintendent passes upon meters no longer fit for use. Those reports give the number and size of the meters condemned during the current month and the reports relating to meter cocks and connections condemned, come to us from the shops for all. It is the same individual who passes upon the question of their being no longer fit for use and reports of services condemned. By "condemned" I would not say they are always unfit for use but are abandoned possibly on account of inadequacy. They do not emanate

from the same source; they come from the street department. The superintendent of each street department passes upon the question of whether or not a service has been condemned. Those reports likewise come to us monthly and I see them and pass upon them. The reports of services condemned do not convey the information that they are condemned because corroded.

No reports of services condemned that come to us contain any notation of services corroded. The report that comes to our accounting department recites specifically by sizes [fol. 1213] the number of services abandoned during the month. The reports that come to me as the head of the accounting department relate to services abandoned. The reason for the abandonment they do not state in their report to the accounting department. If a service has been corroded, that information is to be found in the street department. If the services are corroded, the street department would have the date; that is not within my knowledge. It does not come under my jurisdiction.

Cartage reports are sent monthly to the Accounting Department from each station, shop and street department, and from the Transportation Dept. The reports show the number of hours of service performed and the account to which the work is properly charged.

[fol. 1214] I have reports of mains abandoned and reports of mains withdrawn. That statement I have filed with the record shows the type of the report, report of mains abandoned and report of mains withdrawn; those were two separate things.

Report of mains abandoned is when they abandon a main and allow it to remain in the street, where the expense involved does not warrant taking it up. Withdrawn is when we take it out of the street. It relates to the physical act of taking out the main itself; they are both retired from our fixed capital. The determination is made by the head of the street department as to when a main is to be abandoned and when it is to be withdrawn. The last two are monthly reports.

The blue print report is a report of blue prints made by the drafting department. Whenever blue prints are made for any of the other affiliated gas companies a record is sent to our office so that the proper charge may be made.

That is blue prints for operating and construction work. [fol. 1215] We do not capitalize insurance during construction in the Consolidated Gas Company's accounts.

Any expenses of administering the fire insurance trustees' fund are paid by the trustees and it is not within the knowledge of the Consolidated Gas Company what they may be. I do not know what expenses of administration are incurred in connection with the fund. The trustees of the fund do not make a report of the expenses to the accounting department. None of those administration expenses is in any way reflected in our books of account. The Public Service Commission requires the insurance trustees to file each year a statement of their year's operations, and a balance sheet which operations include the expenses incurred in the administration of the fund. I get that in the form of a report from the insurance trustees and, the request of the Public Service Commission, incorporate it in the P. S. C. report. I believe those details are given in this [fol. 1216] report to the Public Service Commission. The Fire Insurance trustees of that fund are Mr. George B. Cortelyou, Mr. John A. Garver and N. F. Brady. It was a voluntarily created body. They were started about the year 1902. It relates in part, to companies other than those included in the Consolidated System and I do not know whether it is under the control of the State Insurance Department. It is included in the Brooklyn Edison Company; that is the only outside company which is in it. The report of the Public Service Commission gives in detail those expenses of the trustees, in detail, and are listed in the report that is filed with the Commission each year. I am the Auditor of the Trustees Fire Fund, and I do not believe that an outside company would have a set of expenses different from what the Trustee's Fund expenses cover and include.

When construction work which covers additions to plant and equipment is done for the Consolidated Gas Company, it is not paid out of current expenses. It is paid out of the current funds of the company and charged to the proper fixed capital account. That would include all fixed capital additions.

We had had our accounts audited by a firm of outside certified public accountants for a great many years.

(The witness then described in detail the scope of the examination made by such auditors.)

[fol. 1217] The manufacturing reports that I put in evidence April 17th, constitute the bases of the entries in the books in evidence. The underlying data for these reports are the records of the station, a volume known as the Record of Manufacture.

In most cases, the property retired by the Consolidated Gas Company is old property taken over by the Consolidated Gas Company in 1884, and I can locate the cost on the original schedules, upon which the opening set of books were set up at that time, known as the Rowland appraisal. The opening entries for the consolidation in November 1884, were based upon an appraisal made by one Rowland. I have not the slightest knowledge of the basis upon which Mr. Rowland made his appraisal. I have no knowledge on that subject which has been gained as a result of my long years of experience with the Consolidated Gas Company.

Mr. Livingston furnishes vouchers detailing the services rendered by him. Those vouchers come to me with the president's approval on them. The president has authority to approve vouchers. He does that by virtue of his position, and without any specific authority from the Board of Directors or any other governing body of the Consolidated Gas Company, that I have heard of. There is no other employee who furnishes to the accounting department vouchers detailing his services. Those vouchers furnished by Mr. Livingston may sometime relate to traveling expenses, if the president sent him to do any traveling. I cannot say in what way "Gas Logic" involves any traveling upon the part of Mr. Livingston. I never heard of vouchers accumulating for a certain time and then being destroyed. The Accounting Department never destroys any voucher. I will [fol. 1218] say that the Accounting Department has a complete record of every voucher furnished by Mr. Livingston. Mr. Livingston has been connected with the company, I should say eight or ten years. Every voucher that comes to the Accounting Department is still in its files.

I have no way of knowing what is the basis of insurance on properties in outside companies. I know the procedure of the Consolidated Gas Company. The Consolidated Gas

Company never insures any of its destructible property with outside companies for fire, but it does insure with outside companies for other than fire insurance. We do not insure against fire except through the trustees. We have elevator insurance and hold-up insurance, burglary insurance and steam boiler insurance. The trustees insurance covers buildings and other properties and fire insurance on buildings and other properties and we so place insurance for fire. When we place insurance with the trustees we insure on the reproduction cost of the destructible property, excluding foundations.

Speaking of the Astoria Company, the same procedure is pursued with respect to reports on retirements of property as I described with reference to the Consolidated Gas Company.

Since this present suit was started, my time has been devoted to some extent to matters arising out of this litigation and my attention has been engaged from time to time with matters relating to this present litigation during recent months. No part of my time so devoted has been charged to rate case expense. None of my time was taken up on matters before the Public Service Commission in [fol. 1219] the proceeding which resulted in the order of August 1922, changing the rate and the standard.

Mr. Livingston's salary is charged to Promotion Expense, Gas Logic. These vouchers that he gives detailing his services, come to me approved *by* the President. They are regular sundry creditors vouchers made out in the name of Mr. Livingston and approved by the President with no sub-vouchers attached. I just get that one voucher approved by the President. I don't know how many men Mr. Livingston has working under him. I never heard anybody spoken of but that just one girl is up there with him. He has no man under him by the name of Harry Moness. There is a Mr. Harry Moness in the employ of the company. He is connected with the Commercial Department. I cannot say what his duties are. I know he is with that department and reports to Mr. Barnitz our General Superintendent of the Commercial Department. So far as he may be entitled to a commissions for consumers' appliances and that sort of thing, it would appear on the regular commis-

sion voucher furnished by the Commercial Department each month. Commissions paid to him on sales or rentals of gas appliances, are the only occasions on which commissions are paid to him, and those commissions are evidenced by vouchers for all commissions paid. These vouchers are preserved. Mr. Moness's headquarters are I believe somewhere in the General Office Building but I cannot tell you just what floor. He does not occupy any part of those rooms occupied by Mr. Livingston at No. 1 Madison Avenue, that I know of. I believe he is located somewhere in the General Office Building, but I do not know where. It is my testi- [fol. 1220] mony that he has no headquarters or location elsewhere than in the General Office Building, that I know of. I do not know what his salary is. Any salaries paid to any of our people are a matter of record. It is reflected in the books of account, charged to some account. I am not sure just what account his particular salary is charge- to. He is a hotel appliance salesman.

HENRY M. BRUNDAGE

Redirect:

I was asked for a statement of the number of automobiles owned and operated by the Consolidated Gas Company and as to the numbers of the different classes as of December 31, 1922 and as of December 31, 1923 but have now such a statement in the form of a brief tabulation. These statements are copied into the record in lieu of question *of* answer.

(Statements produced by witness read as follows:)

Consolidated Gas Company of New York

Number of Automobiles Owned December 31st, 1922

Passenger Automobiles	26
Gasoline Trucks—Under 2 tons	10
2 tons & over	2
Electric Trucks—Under 2 tons	49
2 tons & over	7
Emergency Cars	8
Total	102

[fol. 1221] Consolidated Gas Company of New York

Number of Automobiles Owned December 31st, 1923

Passenger Automobiles	27
Gasoline Trucks—Under 2 tons	5
2 tons & over	2
Electric Trucks—Under 2 tons	53
2 tons & over	11
Emergency Cars	8
Total	106

As to the basis of the amount of the Consolidated Gas Company's charge for Retirement Expense, formerly called Renewals and Replacements, the losses on property withdrawn from service on the basis of my experience; I have prepared a statement showing the annual amount of such actual expenditures according to our books and the sum which that amounts to in cents per thousand cubic feet of gas sold covering the years 1905 to 1923 inclusive. This tabulation which is to be incorporated as a part of my testimony purports to set forth the amounts charged against renewals and replacements for the years 1905 to and including 1923. It was made up under my supervision by the Accounting Department, from the books of the company in evidence. It shows the amount of the actual annual retirement expense; that is, or amount of property withdrawn from service and charged against this reserve year by year.

During part of that period, we set up in the reserve, for example, three cents, and during part of the period three and one-half cents. Before 1915, there had been still a different basis of accruals The change to three and a half [fol. 1222] cents was made by resolution of the Executive Committee effective January 1st, 1920, by resolution adopted December 21, 1920. This charge of three and a half cents per month made each month, is a regular monthly entry on the basis of the number of cubic feet of gas sold during the month. That is true now as to the accounts Retirement Expense and Retirement Reserve, effective January 1, 1924. This resolution of December 21, 1920 superseded the resolution of October 26, 1915 to which reference was made. I know the change from three cents to three

and a half cents in the year 1920 was made in view of the prior decision of this Court in this company's case. These sums shown in this tabulation are the actual retirement expense.

Prior to 1915, we had a reserve entitled "Renewal and Contingency." It was not called "Accrued Amortization." It was called, prior to 1915, "Renewal and Contingency." These items were charged, prior to 1915, to the reserve, Renewal and Contingency." We did have an account entitled "Accrued Amortization," which was started by instructions and orders of the Public Service Commission about 1909 and was continued for about three or four years. It is not a fact, speaking of the figures upon this tabulation, that beginning 1909, these amounts which this tabulation describes as having been charged to Renewals and Replacements as a matter of fact were charged to Accrued Amortization. They were charged to reserve, Renewal and Contingency. Beginning 1909, we did open an account called "Accrued Amortization." The Commission ordered it. I did not enter into that account any amount shown on this voucher. I entered it in the account entitled "Re-[fol. 1223] newal and Contingency." Of these items we never made any charges or entries in that account. We charged to Accrued Amortization during the time that we had that account set upon our books the variation between estimated and actual repairs, which was the provision of the accounting system effective December 31, 1908, and that was all. That is we set up an accrual for repairs and then took care in that of the difference between the estimated and the actual as they were realized at the end of the year. These, however, are actual retirement expenses and were charged down to 1915 to Renewals and Contingencies, and since that time to Renewals and Replacements down to December 31, 1923.